

Product Specifications Reference

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Camera	Disk SATA GB rpm	Backlit key	M.2 Card	Smart card reader	Fingerprint	ext. battery	Model (G)	Ann. Date
20AR000UUS	i7-4500U	4+4GB	14.0" FHD		720p	128G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR000VUS	i5-4200U	4+4GB	14.0" FHD		720p	128G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR000WUS	i5-4200U	4GB	14.0" FHD		720p	128G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0013US	i5-4300U	4GB	14.0" HD+		None	500G 7200	Backlit	7260 ac upg	16GB	None	3 vPro	G. Win8 Pro64 09/13	
20AR0014US	i5-4300U	4GB	14.0" HD+		720p	500G 7200	Backlit	7260 ac upg	16GB	None	3 vPro	G. Win8 Pro64 09/13	
20AR0015US	i7-4500U	4GB	14.0" FHD MT		720p	500G 7200	Backlit	7260 ac upg	16GB	None	3 vPro	G. Win8 Pro64 09/13	
20AR0017US	i7-4500U	4GB	14.0" FHD		720p	500G 7200	Backlit	7260 ac upg	16GB	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0018US	i7-4500U	4+4GB	14.0" FHD		720p	550G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i7-4500U	4+4GB	14.0" FHD MT		720p	550G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i5-4300U	4GB	14.0" HD+		720p	500G 7200	Backlit	7260 ac upg	16GB	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i5-4300U	4GB	14.0" FHD		720p	256G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i5-4300U	4GB	14.0" HD+		720p	128G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i5-4300U	4GB	14.0" FHD MT		720p	256G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i5-4300U	4+4GB	14.0" HD+		720p	500G 7200	Backlit	7260 ac upg	16GB	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i5-4300U	4GB	14.0" HD+		720p	128G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
20AR0019US	i5-4300U	4+4GB	14.0" FHD		720p	256G SSD	Backlit	7260 ac upg	None	Finger	3 vPro	G. Win8 Pro64 09/13	
Positioning Processor	Premium Ultrabook™ or Thinkbook, one antenna. Intel® Core™ i5-4300U processor (3 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4400, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology												Preloaded operating system™ - Windows 8 Pro 64-bit
Memory	Intel® Core™ i7-4600U processor (3 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4400, DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology												Preloaded applications* (only some listed)
Optical SATA disk	None. Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable. Some: Hard Disk Drive / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™												• Lenovo Solution Center
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader												• Lenovo Support
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio												• Lenovo Companion

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Product Specifications Reference

PREVIEW

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- S Series

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

Additions in this update

► New product(s)

None

► New model(s)

ThinkPad L440 new models announced April 2014 (OS1-5)

ThinkPad L540 new models announced April 2014 (PD1-4)

ThinkPad T440 new models announced April 2014 (CB1-7)

ThinkPad T440p new models announced April 2014 (OA1-8, OA1-9)

ThinkPad T440s new models announced April 2014 (STG1-6)

ThinkPad T540p new models announced April 2014 (KM1-8, KM1-9)

ThinkPad W540 new models announced April 2014 (KM1W-4)

ThinkPad X140e new models announced April 2014 (JT1K-1)

New ThinkPad X1 Carbon new models announced April 2014 (MQ1-4, MQ1-5)

► Others

None

Changes in this update

► None



Lenovo® ThinkPad L430



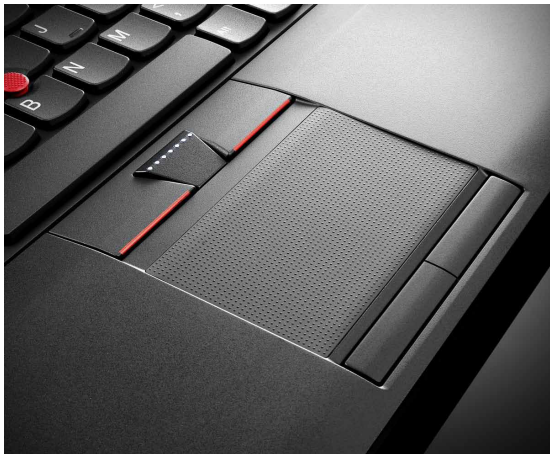
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ThinkPad L430 2468 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2468-2AU	i3-2370M	4GBx1	14.0" HD	720p	320G 7200	Intel 2200	WWAN upg	Express 54	None	None	6	Pro 64	06/12
2468-3AU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 2200	WWAN upg	None	None	None	6	Pro 64	07/12

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64	
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager	
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		Preloaded applications ¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models)	
mSATA™ SSD	None		• ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio		• Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 3000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch			
ThinkLight™	None			
Dimensions ³	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm			
Weight ²	6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.48 lb (2.49kg)			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication			
Battery - life ¹⁰	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr			
Chipset	Mobile Intel HM76 Express Chipset			
ExpressCard	<i>Some:</i> One slot (ExpressCard/34, ExpressCard/54)			
Smart Card read	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card	Two PCI Express Mini Card slots		Supports ThinkVantage® technologies	
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2			
PCIe WWAN	Wireless WAN upgradable		65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Carrier	None			
Modem	None			
Bluetooth™	None			
Ethernet	Realtek® RTL8111F Gigabit Network Connection			
Intel AMT	None			
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole		For compatible accessories, please go to O-L430 sheet;	
Security chip	Trusted Platform Module, TCG 1.2-compliant		For Lenovo service ²² upgrade options, please go to S-TA sheet	
Fingerprint reader	None			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

See footnotes for more detailed information

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ThinkPad L430 2468 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2468-3BU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 2200	WWAN upg	None	None	No	6	Win8 Pro64	10/12
2468-4YU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	02/13
2468-4XU	i5-3230M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	02/13
2468-62U	i3-2348M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	05/13
2468-63U	i3-3110M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	None	BT	6	Win7 Pro64	06/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™			
mSATA™ SSD	None			
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None			
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.48 lb (2.49kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication 6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr			
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset Some: One slot (ExpressCard/34, ExpressCard/54) None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2			
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None Some: Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack			
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip			
Limited warranty ¹² 1-year - depot repair service / service upgrades ²² available				

Supports ThinkVantage® technologies
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-L430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad L430 2469 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2469-24U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	None	Finger	BT	6	Pro 64	06/12
2469-25U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	Pro 64	06/12
2469-26U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	None	6	Pro 64	06/12
2469-27U	i5-3210M	4GBx1	14.0" HD	720p	320G 7200	Intel 2200	WWAN upg	None	None	None	6	Pro 64	06/12
2469-28U	i3-2370M	4GBx1	14.0" HD	720p	500G 7200	Intel 2200	WWAN upg	None	Finger	BT	6	Pro 64	06/12

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology							Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager					
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller							Preloaded applications¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)					
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™												
mSATA™ SSD	None												
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)												
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None												
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>14.0W"</i> (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm <i>6-cell:</i> from 5.11 lb (2.32kg); <i>9-cell:</i> from 5.48 lb (2.49kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication <i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr												
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset None None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)												
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2							Supports ThinkVantage® technologies					
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None <i>Some:</i> Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack							65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²					
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip							For compatible accessories, please go to O-L430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet					
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available												

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(CD1-2) June 2012

ThinkPad L430 2469 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2469-2TU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	10/12
2469-2SU	i5-3210M	4GBx1	14.0" HD	720p	500G 7200	Intel 2200	WWAN upg	Express 54	None	None	6	Win7 Pro64	10/12
2469-2RU	i3-3110M	4GBx1	14.0" HD	720p	320G 7200	Intel 2200	WWAN upg	Express 54	None	None	6	Win7 Pro64	10/12
2469-32U	i5-3230M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	Win7 Pro64	02/13
2469-2ZU	i5-3230M	4GBx1	14.0" HD	720p	320G 7200	Intel 2200	WWAN upg	None	None	None	6	Win7 Pro64	02/13
2469-2YU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	Win7 Pro64	02/13
2469-2XU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	None	6	Win7 Pro64	02/13
2469-2WU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	WLAN upg	WWAN upg	None	Finger	BT	6	Win7 Pro64	02/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™	
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch			
ThinkLight™	None			
Dimensions ³	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm			
Weight ²	<i>6-cell:</i> from 5.11 lb (2.32kg); <i>9-cell:</i> from 5.48 lb (2.49kg)			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication			
Battery - life ¹⁰	<i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr			
Chipset	Mobile Intel HM76 Express Chipset			
ExpressCard	<i>Some:</i> One slot (ExpressCard/34, ExpressCard/54)			
Smart Card read	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card	Two PCI Express Mini Card slots			
PCIe WLAN ⁴	<i>Some:</i> Wireless LAN upgradable <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2			
PCIe WWAN	Wireless WAN upgradable		Supports ThinkVantage® technologies	
Carrier	None		65-watt AC adapter	
Modem	None		EPEAT™ Gold rating	
Bluetooth™	<i>Some:</i> Bluetooth 4.0 wireless		ENERGY STAR® 5.0-compliant	
Ethernet	Realtek® RTL8111F Gigabit Network Connection		GREENGUARD® certified	
Intel AMT	None		RoHS-compliant	
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		International Warranty Service ¹⁷	
Security	Power-on password, hard disk password, supervisor password, security keyhole		24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Security chip	Trusted Platform Module, TCG 1.2-compliant		For compatible accessories, please go to O-L430 sheet;	
Fingerprint reader	<i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip		For Lenovo service ²² upgrade options, please go to S-TA sheet	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(CD1-10) February 2013

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Mini Card Carrier	Smart Card Reader	Card slot	Fingerprint reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G)	Pre-load	Ann Date (mm/yy)
2465-33U	i5-3360M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 ²⁸	upg	None	Smart	Exp 54	Finger	BT	6	W G	Pro 64	06/12
2465-32U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	6	W G	Pro 64	06/12
2465-28U	i7-3520M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	upg	None	None	None	Finger	BT	9		Pro 64	06/12
2465-29U	i5-3360M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	9	G	Pro 64	06/12
2465-2AU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	6	G	Pro 64	06/12
2465-2BU	i5-3360M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	6	G	Pro 64	06/12
2465-2CU	i5-3320M	4GBx1	14.0" HD	None	320G 7200	Intel 2200	upg	None	None	Exp 54	None	BT	6	G	Pro 64	06/12
2465-2DU	i5-3360M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	9	G	Pro 64	06/12
2465-2EU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	6	G	Pro 64	06/12
2465-2FU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	None	No	6	G	Pro 64	06/12
2465-2GU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	Gobi	select	None	None	Finger	BT	9		Pro 64	06/12
2465-2HU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	Gobi	select	None	None	Finger	BT	6		Pro 64	06/12
2465-2JU	i5-3320M	4GBx1	14.0" HD	None	500G 7200	Intel 2200	upg	None	None	None	None	No	6		Pro 64	06/12
2465-2KU	i5-3320M	4GBx1	14.0" HD	None	320G 7200	Intel 2200	upg	None	None	None	None	No	6		Pro 64	06/12

• A depot repair service 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None		
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>14.0W" (WxDxH):</i> 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm <i>6-cell:</i> from 5.11 lb (2.32kg); <i>9-cell:</i> from 5.48 lb (2.49kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication <i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr		
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset <i>Some:</i> One slot (ExpressCard/34, ExpressCard/54) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS		
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None <i>Some:</i> Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For compatible accessories, please go to O-L430 sheet; For Lenovo service²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information
US model(s) withdrawn effective April 2013

ThinkPad L430 2465 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Battery cells	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2465-62U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	Finger	BT	6	G	Win8 Pro64	10/12
2465-65U	i5-3320M	4GBx1	14.0" HD	None	320G 7200	Intel 2200	WWAN upg	None	None	No	6	G	Win8 Pro64	10/12
2465-63U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	G	Win8 Pro64	10/12
2465-64U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	G	Win8 Pro64	10/12

• A depot repair service 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Adobe® Reader®• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions)• Skype™
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm		
Weight ²	6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.48 lb (2.49kg)		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication		
Battery - life ¹⁰	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr		
Chipset	Mobile Intel HM76 Express Chipset		
ExpressCard	None		
Smart Card read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		
PCIe WWAN	Wireless WAN upgradable		
Carrier	None		
Modem	None		
Bluetooth™	<i>Some:</i> Bluetooth 4.0 wireless		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	<i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		
Supports ThinkVantage® technologies			
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
For compatible accessories, please go to O-L430 sheet;			
For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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ThinkPad L430 2465 (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2465-7BU	i5-3360M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Express 54	Finger	BT	9	Win7 Pro64	02/13
2465-7AU	i5-3360M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	02/13
2465-79U	i5-3360M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	9	Win7 Pro64	02/13
2465-78U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	02/13
2465-77U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	None	No	6	Win7 Pro64	02/13
2465-7QU	i3-2348M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	02/13
2465-7PU	i3-2348M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	9	Win7 Pro64	02/13
2465-7NU	i5-3230M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	9	Win7 Pro64	02/13
2465-7MU	i5-3230M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	6	Win8 Pro64	02/13
2465-7GU	i5-3230M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Express 54	Finger	BT	6	Win7 Pro64	02/13

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™	
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™			
mSATA™ SSD	None			
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None			
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.48 lb (2.49kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication 6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr			
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset One slot (ExpressCard/34, ExpressCard/54) None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None Some: Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole		Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip		For compatible accessories, please go to O-L430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet	
Limited warranty ¹² 3-years/1-yr battery - depot repair service / service upgrades ²² available				

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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 (CD1-12) February 2013

ThinkPad L430 2465 (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2465-27U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	None	Express 54	Finger	BT	9	Pro 64	06/12

• A depot repair service 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology								Preloaded operating system²⁰ Genuine Windows® 7 Professional 64				
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller								Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager				
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™								Preloaded applications¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
mSATA™ SSD	None												
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)												
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass												
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch												
ThinkLight™	None												
Dimensions ³	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm												
Weight ²	6-cell: from 5.16 lb (2.34kg); 9-cell: from 5.52 lb (2.51kg)												
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic												
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication												
Battery - life ¹⁰	6-cell (57Whr): up to 5.6 hr; 9-cell (94Whr): up to 9.3 hr												
Chipset	Mobile Intel HM76 Express Chipset												
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)												
Smart Card read	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)												
PCIe Mini Card	Two PCI Express Mini Card slots												
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2												
PCIe WWAN	None												
Carrier	None												
Modem	None												
Bluetooth™	Bluetooth 4.0 wireless												
Ethernet	Realtek® RTL8111F Gigabit Network Connection												
Intel AMT	None												
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available												

See footnotes for more detailed information

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ThinkPad L430 2465 (Optimus) - Windows 8 Product Specifications Reference (PSREF)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ^a rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Card slot	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
2465-7DU	i7-3520M	4GBx2	14.0" HD+	720p	180G SSD	Intel 6205 ²⁸	None	Express 54	Finger	BT	9	Win7 Pro64	02/13
2465-7CU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	None	Express 54	Finger	BT	9	Win7 Pro64	02/13

- **A depot repair service 3-year limited warranty**

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system ²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in	
SATA disk	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536 @85Hz (VGA)	
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass	
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm	
Weight ²	<i>6-cell:</i> from 5.16 lb (2.34kg); <i>9-cell:</i> from 5.52 lb (2.51kg)	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication	
Battery - life ¹⁰	<i>6-cell (57Whr):</i> up to 5.6 hr; <i>9-cell (94Whr):</i> up to 9.3 hr	
Chipset	Mobile Intel HM76 Express Chipset	
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)	
Smart Card read	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
PCIe WWAN	None	
Carrier	None	
Modem	None	
Bluetooth™	Bluetooth 4.0 wireless	
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Intel AMT	None	
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip	
Limited warranty ¹²	3-years /1-yr battery - depot repair service / service upgrades ²² available	

Supports ThinkVantage® technologies
90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-L430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad L430 2466 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Smart Card Reader	Card slot	Finger print reader	Blue-tooth	Bat- tery cells	Workhorse (W) Global (G) Pre- load (mm/yy)	Ann Date
2466-33U	i5-3360M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 ²⁸	upg	None	Smart	Exp 54	Finger	BT	6	W G P Pro 64	06/12
2466-32U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	6	W G P Pro 64	06/12
2466-3AU	i7-3520M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	9	Pro 64	06/12
2466-3BU	i5-3360M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	9	G P Pro 64	06/12
2466-3CU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	6	G P Pro 64	06/12
2466-3DU	i5-3360M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	6	G P Pro 64	06/12
2466-3EU	i5-3360M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	9	G P Pro 64	06/12
2466-3FU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	6	G P Pro 64	06/12
2466-3GU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	Gobi	select	None	Exp 54	Finger	BT	9	Pro 64	06/12
2466-3HU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	Gobi	select	None	Exp 54	Finger	BT	6	Pro 64	06/12
2466-3JU	i5-3320M	4GBx1	14.0" HD	None	500G 7200	Intel 2200	upg	None	None	Exp 54	None	No	6	Pro 64	06/12
2466-3KU	i5-3320M	4GBx1	14.0" HD	None	320G 7200	Intel 2200	upg	None	None	Exp 54	None	No	6	Pro 64	06/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager				
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Preloaded applications¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™														
mSATA™ SSD	None														
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio														
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)														
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None														
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm <i>6-cell:</i> from 5.11 lb (2.32kg); <i>9-cell:</i> from 5.48 lb (2.49kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication <i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr														
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset One slot (ExpressCard/34, ExpressCard/54) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)														
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS														
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None <i>Some:</i> Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack														
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip														
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available														

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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ThinkPad L430 2466 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Smart Card Reader	Card slot	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2466-62U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	None	Finger	BT	6	G P	Win8 Pro64	10/12
2466-63U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6	G P	Win8 Pro64	10/12
2466-64U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6	G P	Win8 Pro64	10/12
2466-5UU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 2200	WWAN upg	None	None	None	No	6		Win7 Pro64	02/13
2466-5TU	i5-3320M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Exp 54	Finger	BT	6		Win7 Pro64	02/13
2466-5SU	i5-3320M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Smart	Exp 54	Finger	BT	6		Win7 Pro64	02/13

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™				
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™														
mSATA™ SSD	None														
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)														
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys														
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass														
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch														
ThinkLight™	None														
Dimensions ³	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24" ; 354mm x 243mm x 29.6–31.4mm														
Weight ²	6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.48 lb (2.49kg)														
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic														
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication														
Battery - life ¹⁰	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr														
Chipset	Mobile Intel HM76 Express Chipset														
ExpressCard	Some: One slot (ExpressCard/34, ExpressCard/54)														
Smart Card read	Some: Smart Card reader														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)														
PCIe Mini Card	Two PCI Express Mini Card slots														
PCIe WLAN ⁴	Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2														
PCIe WWAN	Wireless WAN upgradable														
Carrier	None														
Modem	None														
Bluetooth™	Some: Bluetooth 4.0 wireless														
Ethernet	Realtek® RTL8111F Gigabit Network Connection														
Intel AMT	None														
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip														
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available														

See footnotes for more detailed information

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ThinkPad L430 2466 (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁶ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Card slot	Finger print reader	Blue-tooth	Bat- tery cells	Global (G) GMP (P)	Ann Date
2466-39U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	None	Express 54	Finger	BT	9	No	Pro 64 06/12

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64		
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™										Preloaded applications ¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)		
mSATA™ SSD	None												
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)												
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass												
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch												
ThinkLight™	None												
Dimensions ³	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm												
Weight ²	6-cell: from 5.16 lb (2.34kg); 9-cell: from 5.52 lb (2.51kg)												
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic												
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication												
Battery - life ¹⁰	6-cell (57Whr): up to 5.6 hr; 9-cell (94Whr): up to 9.3 hr												
Chipset	Mobile Intel HM76 Express Chipset												
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)												
Smart Card read	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)												
PCIe Mini Card	Two PCI Express Mini Card slots												
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2												
PCIe WWAN	None												
Carrier	None												
Modem	None												
Bluetooth™	Bluetooth 4.0 wireless												
Ethernet	Realtek® RTL8111F Gigabit Network Connection												
Intel AMT	None												
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip												
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available												
											Supports ThinkVantage® technologies		
											90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²		
											For compatible accessories, please go to O-L430 sheet;		
											For Lenovo service ²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

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ThinkPad L430 Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann 06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann 06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann 12/11/12
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
ThinkPad Port Replicator Series 3 with USB 3.0	433615W	ann 06/05/12
ThinkPad Mini Dock Series 3 - 90W	433710U	ann 06/23/09
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W	433715U	ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W	433815U	ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann 06/05/12

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann 06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann 01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

3M 14.0W Privacy Filter from Lenovo	0A61769	ann 04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06
ExpressCard Gemplus Smart Card Reader ⁵⁷	41N3043	ann 06/27/06

⁵⁷ Only compatible with the models having 54mm Express card slot.

Batteries

ThinkPad Battery 70+ (6-cell)	0A36302	ann 06/05/12
ThinkPad Battery 70++ (9-cell)	0A36303	ann 06/05/12
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter* 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
90W Ultraslim AC/DC Combo Adapter	41R4493	ann 09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08
Lenovo Sport Backpack - Red	0A33896	ann 02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann 02/28/12
Lenovo Sport Messenger - Red	0A33898	ann 02/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) ⁶⁹	2578HB6	ann 10/20/09
⁶⁹ DisplayPort cable is not included.		
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann 08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann 08/16/11

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann 08/14/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann 05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann 06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann 07/24/12
Lenovo USB Soundbar	0A36190	ann 05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad L440



Lenovo ThinkPad L440



Lenovo ThinkPad L440



Lenovo ThinkPad L440



Lenovo ThinkPad L440

ThinkPad L440 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mainstream value performance; two spindles									WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none">• ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 Card• Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card
Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor									WWAN (optional)	One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none">• Wireless WAN upgradable• Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology	SIM card (optional)	One of the following, configurable by model: <ul style="list-style-type: none">• AT&T® or Verizon® LTE (4G), contract required with service provider• User selectable, contract required with service provider
	Cel 2950M	2	2	2.0 GHz	-	2MB	DDR3L-1600	Intel HD Graphics	No	Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter <i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)
	i3-4000M		4	2.4 GHz	-	3MB		No			
	i5-4200M			2.5 GHz	3.1 GHz	3MB		No			
	i5-4300M			2.6 GHz	3.3 GHz	3MB		Yes			
	i5-4330M			2.8 GHz	3.5 GHz	3MB		Yes			
	i7-4600M		2.9 GHz	3.6 GHz	4MB	Yes					
	i7-4702MQ	4	8	2.2 GHz	3.2 GHz	6MB			No		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Security	Power-on password, hard disk password, supervisor password, security keyhole
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in									Security chip vPro & iAMT	Trusted Platform Module, TCG 1.2-compliant
SATA disk	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™									Fingerprint reader	vPro and Intel Active Management Technology (iAMT) support on selected models
M.2 SSD	All: removable, upgradable, Shock Mounted Hard Drive Some: M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card									Limited warranty ¹²	Optional: Fingerprint reader on the keyboard bezel, swipe sensor
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 500:1 contrast ratio									One of the following, configurable by model: <ul style="list-style-type: none">• 1-year - depot repair service / service upgrades²² available• 3-years/1-yr battery - depot repair service / service upgrades available• 3-years/1-yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available For Lenovo service upgrade options, please go to S-TA sheet	
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus									Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit
Graphics	Intel HD Graphics 4600 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports dual independent display; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)										Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit
Keyboard	6-row, spill-resistant, multimedia Fn keys										• Lenovo Solution Center
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch										• Lenovo Support
ThinkLight™	None										• Lenovo Companion
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm										• ThinkVantage System Update
Weight ²	Models	6-cell 48Wh		6-cell 56Wh		9-cell 99.9Wh			• Lenovo Reach (Window 8.1 model)		
	Weight	4.96 lb / 2.25kg		5.0 lb / 2.27kg		5.36 lb / 2.43kg			• Hightail - Metro (Window 8.1 model)		
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic										• Lenovo Cloud Storage by SugarSync
Battery - type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication										• Metro (Window 8 model)
Battery - life ¹⁰	Models	6-cell 48Wh		6-cell 56Wh		9-cell 99.9Wh			• Lenovo Cloud Storage by SugarSync (Window 8 model)		
	Win7 (MobileMark® 2007)	10 hr		11 hr		21 hr			• PC Device Stage		
	Win8 (MobileMark 2012)	6.2 hr		7.5 hr		13 hr			• AccuWeather		
AC adapter	65-watt AC adapter										• Amazon Kindle
Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset										• Nitro Pro
ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)										• Evernote
Smart Card Read	Optional: Smart Card reader										• Skype
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										• Microsoft® Office preloaded; purchase a product key to activate
Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector										• Norton Internet Security (30 days of virus definitions)
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack										• Cyberlink PowerDVD
										Environment	EPEAT™ Gold; ENERGY STAR® 5.0; RoHS-compliant
											• Cyberlink Power2Go
											• Cyberlink PowerProducer

See footnotes for more detailed information

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(OS1-Spec) April 2014

ThinkPad L440 20AT (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/ SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AT0008US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	Intel 6235	upg	None	Finger	None	6(48wh)	Win7 P64	1-Depot	No	09/13
20AT0009US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 b/g/n	upg	None	Finger	None	6(48wh)	Win7 P64	1-Depot	No	09/13
20AT000AUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	Intel 6235	upg	None	Finger	Smart	6(48wh)	Win7 P64	1-Depot	No	09/13
20AT000BUS	i3-4000M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	Intel 6235	upg	None	None	None	6(48wh)	Win7 P64	1-Depot	No	09/13
20AT001YUS	i3-4000M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	09/13
20AT0020US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	09/13
20AT0021US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	09/13
20AT0027US	i7-4702MQ	4GBx1	14" HD+	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AT0028US	i7-4702MQ	4GBx1	14" HD+	HM86	HD 4600	720p	1T 5400	7260 ac	16GB	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AT0029US	i7-4702MQ	4GBx1	14" HD+	HM86	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AT002AUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	11/13
20AT002BUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002CUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002DUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002EUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	180G SSD OPAL	Intel 6235	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	10/13
20AT002FUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	180G SSD OPAL	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	10/13
20AT002GUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002HUS	i7-4600M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002JUS	i7-4600M	4GBx1	14" HD+	QM87	HD 4600	720p	1T 5400	7260 ac	16GB	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002KUS	i7-4600M	4GBx1	14" HD+	QM87	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002LUS	i7-4600M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002MUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	1-Depot	No	11/13
20AT002NUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	9	Win7 P64 DG Win8	1-Depot	No	11/13
20AT002PUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	EM7355	select	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002QUS	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	180G SSD OPAL	Intel 6235	EM7355	select	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	10/13

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor							Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset								
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)								
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in							Smart Card Read	Optional: Smart Card reader								
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS							Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)								
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card							Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector								
Widescreen display	Some: 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio							WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card								
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus							WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS								
Graphics	Intel HD Graphics 4600 in processor							SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider								
Keyboard	6-row, spill-resistant, multimedia Fn keys							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch							Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)								
ThinkLight™	None							Security	Power-on password, hard disk password, supervisor password, security keyhole								
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm							Security chip	Trusted Platform Module, TCG 1.2-compliant								
Weight ²								vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models								
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic							Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor								
Battery - type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication							Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit								
Battery - life ¹⁰									Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit								
AC adapter	65-watt AC adapter																
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																

See footnotes for more detailed information

US model(s) withdrawn effective October 2013

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(OS1-1) November 2013

ThinkPad L440 20AT (TopSeller) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AT002RUS	i7-4600M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	EM7355	select	Finger	Smart	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002SUS	i5-4330M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	None	Smart	6(56wh)	Win7 P64 DG Win8	1-Depot	No	11/13
20AT002TUS	i5-4330M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002UUS	i5-4330M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002VUS	i5-4330M	4GBx1	14" HD+	QM87	HD 4600	720p	180G SSD OPAL	Intel 6235	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	10/13
20AT002WUS	i5-4330M	4GBx1	14" HD+	QM87	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AT002XUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	11/13
20AT0042US	Cel 2950M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	EM7355	select	None	None	6(56wh)	Win7 P64 DG Win8.1	1-Depot	No	03/14
20AT0043US	Cel 2950M	2GBx1	14" HD	HM86	HD 4600	720p	500G 7200	TP 11b/g/n	EM7355	select	None	None	6(56wh)	Win7 P64 DG Win8.1	1-Depot	No	03/14

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor				Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset												
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)												
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in				Smart Card Read	Optional: Smart Card reader												
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card				Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector												
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card												
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
Graphics	Intel HD Graphics 4600 in processor				SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider												
Keyboard	6-row, spill-resistant, multimedia Fn keys				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)												
ThinkLight™	None				Security	Power-on password, hard disk password, supervisor password, security keyhole												
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm				Security chip	Trusted Platform Module, TCG 1.2-compliant												
Weight ²	<table><tr><td><i>Models</i></td><td><i>6-cell 48Wh</i></td><td><i>6-cell 56Wh</i></td><td><i>9-cell 99.9Wh</i></td></tr><tr><td><i>Weight</i></td><td>4.96 lb / 2.25kg</td><td>5.0 lb / 2.27kg</td><td>5.36 lb / 2.43kg</td></tr></table>				<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	<i>Weight</i>	4.96 lb / 2.25kg	5.0 lb / 2.27kg	5.36 lb / 2.43kg	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models				
<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>															
<i>Weight</i>	4.96 lb / 2.25kg	5.0 lb / 2.27kg	5.36 lb / 2.43kg															
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic				Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Battery - type	Li-Ion 6-cell (<i>48Wh</i> or <i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication				Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit												
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell 48Wh</i></td><td><i>6-cell 56Wh</i></td><td><i>9-cell 99.9Wh</i></td></tr><tr><td><i>Win7 (MobileMark® 2007)</i></td><td>10 hr</td><td>11 hr</td><td>21 hr</td></tr><tr><td><i>Win8 (MobileMark 2012)</i></td><td>6.2 hr</td><td>7.5 hr</td><td>13 hr</td></tr></table>				<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	<i>Win7 (MobileMark® 2007)</i>	10 hr	11 hr	21 hr	<i>Win8 (MobileMark 2012)</i>	6.2 hr	7.5 hr	13 hr		<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>															
<i>Win7 (MobileMark® 2007)</i>	10 hr	11 hr	21 hr															
<i>Win8 (MobileMark 2012)</i>	6.2 hr	7.5 hr	13 hr															
AC adapter	65-watt AC adapter				Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite													
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																	

See footnotes for more detailed information

ThinkPad L440 20AS

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AS000SUS	i7-4600M	8GBx1	14" HD+	QM87	HD 4600	720p	256G SSD OPAL	Intel 6235	upg	None	Finger	Smart	9	Win7 P64	3-Depot	Yes	09/13
20AS000WUS	i5-4330M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	Intel 6235	upg	None	Finger	Smart	6(48wh)	Win7 P64	3-Depot	Yes	09/13
20AS000XUS	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 b/g/n	upg	None	Finger	None	6(48wh)	Win7 P64	3-Depot	Yes	09/13
20AS000YUS	i5-4330M	4GBx1	14" HD	QM87	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	Smart	6(48wh)	Win7 P64	3-Depot	Yes	09/13
20AS0010US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	128G SSD	7260 b/g/n	upg	None	None	None	6(48wh)	Win7 P64	3-Depot	Yes	09/13
20AS0011US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 b/g/n	upg	None	None	None	6(48wh)	Win7 P64	3-Depot	Yes	09/13
20AS001NUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AS002CUS	i3-4000M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002DUS	i3-4000M	2GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002EUS	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002FUS	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	Intel 6235	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002GUS	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002HUS	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002JUS	i7-4702MQ	8GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002KUS	i7-4702MQ	8GBx1	14" HD	HM86	HD 4600	720p	1T 5400	Intel 6235	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002LUS	i7-4702MQ	8GBx1	14" HD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002MUS	i7-4702MQ	8GBx1	14" HD+	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002NUS	i7-4702MQ	8GBx1	14" HD+	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002SUS	i7-4702MQ	8GBx1	14" HD+	HM86	HD 4600	720p	1T 5400	7260 ac	EM7355	select	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002TUS	i7-4702MQ	8GBx1	14" HD+	HM86	HD 4600	720p	256G SSD OPAL	7260 ac	EM7355	select	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002UUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	Intel 6235	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002VUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	Intel 6235	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS002WUS	i5-4330M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AS002XUS	i5-4330M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	16GB	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AS002YUS	i5-4330M	4GBx1	14" HD	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor							Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset								
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)								
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in							Smart Card Read	Optional: Smart Card reader								
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS							Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)								
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card							Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector								
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio							WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card								
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus							WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS								
Graphics	Intel HD Graphics 4600 in processor							SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider								
Keyboard	6-row, spill-resistant, multimedia Fn keys							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch							Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)								
ThinkLight™	None							Security	Power-on password, hard disk password, supervisor password, security keyhole								
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm							Security chip	Trusted Platform Module, TCG 1.2-compliant								
Weight ²								vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models								
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic							Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor								
Battery - type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication							Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit								
Battery - life ¹⁰									Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit								
AC adapter	65-watt AC adapter																
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																

See footnotes for more detailed information
US model(s) withdrawn effective October 2013

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(OS1-4) November 2013

ThinkPad L440 20AS - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AS0030US	i5-4330M	8GBx1	14" HD	QM87	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AS0031US	i7-4600M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AS0032US	i7-4600M	8GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	Intel 6235	16GB	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AS0033US	i7-4600M	8GBx1	14" HD+	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AS0034US	i7-4600M	8GBx1	14" HD+	QM87	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AS005TUS	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	No	04/14
20AS005UUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	No	04/14
20AS005VUS	i5-4300M	8GBx1	14" HD	QM87	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	No	04/14
20AS005WUS	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200 OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	No	04/14
20AS005XUS	i5-4300M	8GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8.1	3-Depot	No	04/14
20AS005YUS	i7-4600M	8GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	No	04/14
20AS0060US	i7-4600M	8GBx1	14" HD+	QM87	HD 4600	720p	500G 7200 OPAL	7260 ac	upg	None	Finger	Smart	9	Win7 P64 DG Win8.1	3-Depot	No	04/14
20AS0061US	i5-4300M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AS0062US	i7-4600M	8GBx1	14" HD+	QM87	HD 4600	720p	256G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AS0063US	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	1-Depot	Yes	04/14
20AS0064US	i5-4300M	4GBx1	14" HD	QM87	HD 4600	720p	500G 7200	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AS0065US	i5-4300M	8GBx1	14" HD+	QM87	HD 4600	720p	256G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AS0066US	i7-4600M	4GBx1	14" HD+	QM87	HD 4600	720p	500G 7200	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor							Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset								
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)								
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in							Smart Card Read	Optional: Smart Card reader								
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS							Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)								
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card							Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector								
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio							WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card								
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus							WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS								
Graphics	Intel HD Graphics 4600 in processor							SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider								
Keyboard	6-row, spill-resistant, multimedia Fn keys							Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch							Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)								
ThinkLight™	None							Security	Power-on password, hard disk password, supervisor password, security keyhole								
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm							Security chip	Trusted Platform Module, TCG 1.2-compliant								
Weight ²								vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models								
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic							Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor								
Battery - type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication							Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit								
Battery - life ¹⁰									<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit								
AC adapter	65-watt AC adapter																
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack																

See footnotes for more detailed information

ThinkPad L440 20AS (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AS0003US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	7260 b/g/n	upg	None	None	None	6(48wh)	Win8 64	3-Depot	No	09/13
20AS0012US	i5-4200M	4GBx1	14" HD	HM86	HD 4600	720p	500G 7200	Intel 6235	upg	None	None	None	6(48wh)	Win8 P64	3-Depot	Yes	09/13

• For detailed platform specifications, please see [ThinkPad L440 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor				Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)			
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in				Smart Card Read	Optional: Smart Card reader			
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card				Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector			
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 500:1 contrast ratio				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card			
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS			
Graphics	Intel HD Graphics 4600 in processor				SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider			
Keyboard	6-row, spill-resistant, multimedia Fn keys				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)			
ThinkLight™	None				Security	Power-on password, hard disk password, supervisor password, security keyhole			
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.14-1.35"; 344mm x 239mm x 29.0-34.25mm				Security chip	Trusted Platform Module, TCG 1.2-compliant			
Weight ²					vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models			
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic				Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
Battery - type	Li-Ion 6-cell (<i>48Wh</i> or <i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication				Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit			
Battery - life ¹⁰						<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit			
AC adapter	65-watt AC adapter								
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			

See footnotes for more detailed information



Lenovo® ThinkPad L530



Lenovo ThinkPad L530



Lenovo ThinkPad L530



Lenovo ThinkPad L530



Lenovo ThinkPad L530



Lenovo Sport Backpack - Blue0B47298

Lenovo Sport Backpack - Red0A33896

Lenovo Sport Backpack - Grey0B47301

ThinkPad L530 2481 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB [®] rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2481-26U	i3-2370M	4GBx1	15.6" HD	720p	320G 7200	Intel 2200	WWAN upg	None	None	None	6	Pro 64	06/12
2481-34U	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 2200	WWAN upg	None	None	None	6	Pro 64	07/12

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
ThinkLight™	None		
Dimensions ³	15.6W" (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm		
Weight ²	6-cell: from 5.69 lb (2.58kg); 9-cell: from 6.05 lb (2.75kg)		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication		
Battery - life ¹⁰	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr		
Chipset	Mobile Intel HM76 Express Chipset		
ExpressCard	None		
Smart Card read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2		
PCIe WWAN	Wireless WAN upgradable		
Carrier	None		
Modem	None		
Bluetooth™	None		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For compatible accessories, please go to O-L530 sheet;		
For Lenovo service²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

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(BF1-1) August 2012

ThinkPad L530 2481 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Smart Card Reader	Card slot	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
2481-33U	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 2200	WWAN upg	None	None	None	No	6	Win8 Pro64	10/12
2481-4RU	i3-2348M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	Express 54	Finger	BT	9	Win7 Pro64	02/13
2481-4QU	i3-2348M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Express 54	Finger	BT	6	Win7 Pro64	02/13
2481-55U	i5-3230M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Smart	Express 54	Finger	BT	6	Win7 Pro64	05/13
2481-5RU	i5-3230M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Express 54	Finger	BT	6	Win7 Pro64	06/13
2481-56U	i3-3110M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Express 54	None	BT	6	Win7 Pro64	06/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)	
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™			
mSATA™ SSD	None			
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch			
ThinkLight™	None			
Dimensions ³	15.6W" (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm			
Weight ²	6-cell: from 5.69 lb (2.58kg); 9-cell: from 6.05 lb (2.75kg)			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication			
Battery - life ¹⁰	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr			
Chipset	Mobile Intel HM76 Express Chipset			
ExpressCard	Some: One slot (ExpressCard/34, ExpressCard/54)			
Smart Card read	Some: Smart Card reader			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card	Two PCI Express Mini Card slots			
PCIe WLAN ⁴	Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2			
PCIe WWAN	Wireless WAN upgradable			
Carrier	None			
Modem	None			
Bluetooth™	Some: Bluetooth 4.0 wireless			
Ethernet	Realtek® RTL8111F Gigabit Network Connection			
Intel AMT	None			
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Fingerprint reader	Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip			
Limited warranty ¹² 1-year - depot repair service / service upgrades ²² available			Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-L530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet	

See footnotes for more detailed information

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(BF1-5) June 2013

ThinkPad L530 2485 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2485-22U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	Finger	BT	6	Pro 64	06/12
2485-23U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	Pro 64	06/12
2485-24U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	None	6	Pro 64	06/12
2485-25U	i5-3210M	4GBx1	15.6" HD	720p	320G 7200	Intel 2200	WWAN upg	None	None	None	6	Pro 64	06/12
2485-26U	i3-2370M	4GBx1	15.6" HD	720p	500G 7200	Intel 2200	WWAN upg	None	Finger	BT	6	Pro 64	06/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology							Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)						
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller													
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™													
mSATA™ SSD	None													
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)													
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None													
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm <i>6-cell:</i> from 5.69 lb (2.58kg); <i>9-cell:</i> from 6.05 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication <i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr													
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset None None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)													
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 Wireless WAN upgradable													
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	None None <i>Some:</i> Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack													
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip													
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available							Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-L530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet						

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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 (BF1-2) August 2012

ThinkPad L530 2478

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Card Carrier	Smart Card Reader	Card slot	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G)	Pre-load	Ann Date (mm/yy)
2478-23U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	upg	None	None	None	Finger	BT	9		Pro 64	06/12
2478-24U	i7-3520M	4GBx1	15.6" HD+	720p	320G 7200	Intel 6205	upg	None	None	None	Finger	BT	9		Pro 64	06/12
2478-25U	i5-3360M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	upg	None	None	None	Finger	BT	9	G	Pro 64	06/12
2478-26U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	upg	None	None	None	Finger	BT	6	G	Pro 64	06/12
2478-27U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	upg	None	None	None	None	No	6	G	Pro 64	06/12
2478-28U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 2200	upg	None	None	None	Finger	BT	6	G	Pro 64	06/12
2478-29U	i5-3320M	4GBx1	15.6" HD	None	320G 7200	Intel 2200	upg	None	None	None	None	BT	6	G	Pro 64	06/12
2478-2AU	i5-3360M	4GBx1	15.6" HD+	720p	320G 7200	Intel 6205	upg	None	None	None	Finger	BT	9	G	Pro 64	06/12
2478-2BU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	upg	None	None	None	Finger	BT	6	G	Pro 64	06/12
2478-2CU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	upg	None	None	None	None	No	6	G	Pro 64	06/12
2478-2DU	i5-3360M	4GBx1	15.6" HD+	720p	320G 7200	Intel 6205	Gobi	select	None	None	Finger	BT	9		Pro 64	06/12
2478-2FU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	Gobi	select	None	None	Finger	BT	6		Pro 64	06/12
2478-2GU	i5-3320M	4GBx1	15.6" HD	None	500G 7200	Intel 2200	upg	None	None	None	None	No	6		Pro 64	06/12
2478-2HU	i5-3320M	4GBx1	15.6" HD	None	320G 7200	Intel 2200	upg	None	None	None	None	No	6		Pro 64	06/12
2478-2XU	i5-3360M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	9	G	Pro 64	06/12
2478-2YU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	6	G	Pro 64	06/12
2478-32U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	6	W G	Pro 64	06/12
2478-33U	i5-3360M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	9	W G	Pro 64	06/12
Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager				
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller											Preloaded applications¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™															
mSATA™ SSD	None															
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio															
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus															
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)															
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None															
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm <i>6-cell:</i> from 5.69 lb (2.58kg); <i>9-cell:</i> from 6.05 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication <i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr															
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset <i>Some:</i> One slot (ExpressCard/34, ExpressCard/54) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)															
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2															
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS											Supports ThinkVantage® technologies				
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None <i>Some:</i> Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack											65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip											For compatible accessories, please go to O-L530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available															

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(BF1-3) August 2012

ThinkPad L530 2478 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Smart Card Reader	Card slot	Finger print reader	Blue-tooth	Bat- tery cells	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2478-62U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	None	Finger	BT	6	G	Win8 Pro64	10/12
2478-4NU	i5-3320M	4GBx1	15.6" HD	None	320G 7200	Intel 2200	WWAN upg	None	None	None	No	6	G	Win8 Pro64	10/12
2478-63U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6	G	Win8 Pro64	10/12
2478-64U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6	G	Win8 Pro64	10/12
2478-5RU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6		Win7 Pro64	02/13
2478-5QU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6		Win7 Pro64	02/13
2478-5PU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	None	None	No	6		Win7 Pro64	02/13
2478-5NU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6		Win7 Pro64	02/13
2478-5MU	i5-3320M	4GBx1	15.6" HD	None	320G 7200	Intel 2200	WWAN upg	None	None	None	No	6		Win7 Pro64	02/13
2478-5LU	i5-3230M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Smart	Exp 54	Finger	BT	6		Win7 Pro64	02/13
2478-5KU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Smart	Exp 54	Finger	BT	6		Win7 Pro64	02/13
2478-5SU	i5-3230M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Exp 54	Finger	BT	6		Win7 Pro64	02/13

• A depot repair service 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology			Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit		
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™					
mSATA™ SSD	None					
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio					
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)					
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None					
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>15.6W"</i> (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm <i>6-cell:</i> from 5.69 lb (2.58kg); <i>9-cell:</i> from 6.05 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication <i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr					
Chipset ExpressCard Smart Card read Multicard Reader Ports	Mobile Intel HM76 Express Chipset <i>Some:</i> One slot (ExpressCard/34, ExpressCard/54) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)					
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2					
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None <i>Some:</i> Bluetooth 4.0 wireless Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole					
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip					
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-L530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

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ThinkPad L530 2479 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card Carrier	Smart Card Reader	Card slot	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G)	Pre-load	Ann Date (mm/yy)
2479-32U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205 ²⁸	upg	None	Smart	Exp 54	Finger	BT	6	W G P	Pro 64	06/12
2479-33U	i5-3360M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	9	W G P	Pro 64	06/12
2479-39U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	upg	None	None	None	Finger	BT	9		Pro 64	06/12
2479-3AU	i7-3520M	4GBx1	15.6" HD+	720p	320G 7200	Intel 6205	upg	None	None	None	Finger	BT	9		Pro 64	06/12
2479-3BU	i5-3360M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	upg	None	None	None	Finger	BT	9	G P	Pro 64	06/12
2479-3CU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	upg	None	None	None	Finger	BT	6	G P	Pro 64	06/12
2479-3DU	i5-3360M	4GBx1	15.6" HD+	720p	320G 7200	Intel 6205	upg	None	None	None	Finger	BT	9	G P	Pro 64	06/12
2479-3EU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	upg	None	None	None	Finger	BT	6	G P	Pro 64	06/12
2479-3GU	i5-3360M	4GBx1	15.6" HD+	720p	320G 7200	Intel 6205	Gobi	select	None	None	Finger	BT	9		Pro 64	06/12
2479-53U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	Gobi	select	None	None	Finger	BT	6		Pro 64	06/12
2479-3MU	i5-3320M	4GBx1	15.6" HD	None	500G 7200	Intel 2200	upg	None	None	None	None	No	6		Pro 64	06/12
2479-3PU	i5-3320M	4GBx1	15.6" HD	None	320G 7200	Intel 2200	upg	None	None	None	None	No	6		Pro 64	06/12
2479-44U	i5-3360M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	9		Pro 64	06/12
2479-45U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	upg	None	Smart	Exp 54	Finger	BT	6		Pro 64	06/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
ThinkLight™	None		
Dimensions ³	<i>15.6W" (WxDxH):</i> 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm		
Weight ²	<i>6-cell:</i> from 5.69 lb (2.58kg); <i>9-cell:</i> from 6.05 lb (2.75kg)		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication		
Battery - life ¹⁰	<i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr		
Chipset	Mobile Intel HM76 Express Chipset		
ExpressCard	<i>Some:</i> One slot (ExpressCard/34, ExpressCard/54)		
Smart Card read	<i>Some:</i> Smart Card reader		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS		
Carrier	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider		
Modem	None		
Bluetooth™	<i>Some:</i> Bluetooth 4.0 wireless		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	<i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		
			Supports ThinkVantage® technologies
			65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
			For compatible accessories, please go to O-L530 sheet;
			For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(BF1-4) August 2012

ThinkPad L530 2479 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Smart Card Reader	Card slot	Finger print reader	Blue-tooth	Bat- tery cells	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2479-62U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	None	Finger	BT	6	G P	Win8 Pro64	10/12
2479-63U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6	G P	Win8 Pro64	10/12
2479-64U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6	G P	Win8 Pro64	10/12
2479-5LU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Smart	Exp 54	Finger	BT	6		Win7 Pro64	02/13
2479-5KU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	None	Finger	BT	6		Win7 Pro64	02/13

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Preloaded applications⁵ (only some listed)				
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™										- Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
mSATA™ SSD	None										- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)				
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio										- All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • FingerPrint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™				
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										Supports ThinkVantage® technologies				
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)										65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
Keyboard TrackPoint®	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys										For compatible accessories, please go to O-L530 sheet;				
Touch pad ThinkLight™	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None										For Lenovo service ²² upgrade options, please go to S-TA sheet				
Dimensions ³	15.6W" (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm														
Weight ²	6-cell: from 5.69 lb (2.58kg); 9-cell: from 6.05 lb (2.75kg)														
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic														
Battery - type	Lithium Ion 6-cell or 9-cell, HW Authentication														
Battery - life ¹⁰	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr														
Chipset	Mobile Intel HM76 Express Chipset														
ExpressCard	Some: One slot (ExpressCard/34, ExpressCard/54)														
Smart Card read	Some: Smart Card reader														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	One USB 3.0, three USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)														
PCIe Mini Card	Two PCI Express Mini Card slots														
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2														
PCIe WWAN	Wireless WAN upgradable														
Carrier	None														
Modem	None														
Bluetooth™	Bluetooth 4.0 wireless														
Ethernet	Realtek® RTL8111F Gigabit Network Connection														
Intel AMT	None														
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, supports the security chip														
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available														

See footnotes for more detailed information

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(BF1-7) February 2013

ThinkPad L530 Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann	06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann	06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann	12/11/12
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3 with USB 3.0	433615W	ann	06/05/12
ThinkPad Mini Dock Series 3 - 90W	433710U	ann	06/23/09
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W	433715U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W	433815U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann	06/05/12

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

3M 15.6W Privacy Filter from Lenovo	0A61771	ann	04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06
ExpressCard Gemplus Smart Card Reader ⁵⁷	41N3043	ann	06/27/06

⁵⁷ Only compatible with the models having 54mm Express card slot.

Batteries

ThinkPad Battery 70+ (6-cell)	0A36302	ann	06/05/12
ThinkPad Battery 70++ (9-cell)	0A36303	ann	06/05/12
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter* 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
⁴⁵ Only compatible with the integrated graphics models.			
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12
Lenovo Sport Backpack - Blue	0B47298	ann	08/28/12
Lenovo Sport Slimcase - Blue	0B47300	ann	08/28/12
Lenovo Sport Messenger - Blue	0B47299	ann	08/28/12
Lenovo Sport Backpack - Grey	0B47301	ann	08/28/12
Lenovo Sport Slimcase - Grey	0B47303	ann	08/28/12
Lenovo Sport Messenger - Grey	0B47302	ann	08/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) ⁶⁹	2578HB6	ann	10/20/09
⁶⁹ DisplayPort cable is not included.			
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann	08/16/11

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann	08/14/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann	05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann	06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann	07/24/12
Lenovo USB Soundbar	0A36190	ann	05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad L540



Lenovo ThinkPad L540



Lenovo ThinkPad L540



Lenovo ThinkPad L540



Lenovo ThinkPad L540

ThinkPad L540 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mainstream business performance; two spindles									Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack			
Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor										WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none">• ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 Card• Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card		
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology	WWAN (optional)		One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none">• Wireless WAN upgradable• Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card		
	Cel 2950M	2	2	2.0 GHz	-	2MB	DDR3L-1600	Intel HD Graphics	No			SIM card (optional)	One of the following, configurable by model: <ul style="list-style-type: none">• AT&T® or Verizon® LTE (4G), contract required with service provider• User selectable, contract required with service provider	
	i3-4000M		4	2.4 GHz	-	3MB		Intel HD Graphics 4600	No					
	i5-4200M			2.5 GHz	3.1 GHz	3MB		No						
	i5-4300M			2.6 GHz	3.3 GHz	3MB		Yes						
	i5-4330M			2.8 GHz	3.5 GHz	3MB		Yes						
	i7-4600M	2.9 GHz	3.6 GHz	4MB	Yes									
	i7-4702MQ	4	8	2.2 GHz	3.2 GHz	6MB	No							
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in										Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)		
SATA disk	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™										Security	Power-on password, hard disk password, supervisor password, security keyhole		
M.2 SSD	All: removable, upgradable, Shock Mounted Hard Drive										Security chip	Trusted Platform Module, TCG 1.2-compliant		
	Some: M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card										vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models		
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio										Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor		
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										Limited warranty ¹² One of the following, configurable by model: <ul style="list-style-type: none">• 1-year - depot repair service / service upgrades²² available• 3-years/1-yr battery - depot repair service / service upgrades available• 3-years/1-yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available For Lenovo service upgrade options, please go to S-TA sheet			
Graphics	Intel HD Graphics 4600 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports dual independent display; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)										Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">• Lenovo Solution Center• ThinkVantage Product Recovery• Rescue and Recovery™• ThinkVantage System Update• Lenovo Cloud Storage by SugarSync• PC Device Stage• Nitro Pro• Evernote®• Skype™• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions)• Cyberlink PowerDVD• Cyberlink Power2Go• Cyberlink PowerProducer Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">• Lenovo Solution Center• Lenovo Support• Lenovo Companion• ThinkVantage System Update• Lenovo Reach (Window 8.1 model)• Hightail - Metro (Window 8.1 model)• Lenovo Cloud Storage by SugarSync - Metro (Window 8 model)• Lenovo Cloud Storage by SugarSync (Window 8 model)• PC Device Stage• AccuWeather• Amazon Kindle• Nitro Pro• Evernote• Skype• Rara Streaming• Norton Studio• Microsoft Office preloaded; purchase a product key to activate• Norton Internet Security (30 days of virus definitions)• Cyberlink PowerDVD• Cyberlink Power2Go• Cyberlink PowerProducer		
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad													
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch													
ThinkLight™	None													
Dimensions ³	HD (WxDxH): 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm FHD (WxDxH): 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm													
Weight ²	Models	6-cell 48Wh			6-cell 56Wh			9-cell 99.9Wh						
	HD	5.54lb / 2.52kg			5.60lb / 2.54kg			5.95lb / 2.70kg						
	FHD	5.68lb / 2.58kg			5.73lb / 2.60kg			6.08lb / 2.76kg						
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic													
Battery - type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication													
Battery - life ¹⁰	Models	6-cell 48Wh			6-cell 56Wh			9-cell 99.9Wh						
	Win7 (MobileMark® 2007)	9 hr			11 hr			19 hr						
	Win8 (MobileMark 2012)	6 hr			7 hr			12 hr						
AC adapter	65-watt AC adapter													
Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset													
ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)													
Smart Card Read	Optional: Smart Card reader													
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector													
Environment	EPEAT™ Gold; ENERGY STAR® 5.0; RoHS-compliant													

See footnotes for more detailed information

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ThinkPad L540 20AV (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AV0024US	i3-4000M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	09/13
20AV0025US	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	09/13
20AV0026US	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	09/13
20AV002VUS	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	TP 11b/g/n	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	09/13
20AV000LUS	i3-4000M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 b/g/n	upg	None	Finger	None	6(48wh)	Win7 P64	1-Depot	No	09/13
20AV000NUS	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 b/g/n	upg	None	Finger	None	6(48wh)	Win7 P64	1-Depot	No	09/13
20AV0027US	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	11/13
20AV002FUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	1-Depot	No	11/13
20AV000PUS	i5-4330M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	Intel 6235	EM7355	Verizon	Finger	Smart	6(48wh)	Win7 P64	1-Depot	No	09/13
20AV000QUS	i5-4330M	4GBx1	15.6" HD	QM87	HD 4600	720p	128G SSD	Intel 6235	EM7355	Verizon	Finger	Smart	6(48wh)	Win7 P64	1-Depot	No	09/13
20AV002RUS	i7-4600M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	Intel 6235	upg	None	Finger	Smart	9	Win7 P64	1-Depot	No	09/13
20AV000SUS	i7-4600M	8GBx1	15.6" HD	QM87	HD 4600	720p	256G SSD OPAL	Intel 6235	upg	None	Finger	Smart	9	Win7 P64	1-Depot	No	09/13
20AV0028US	i5-4200M	4GBx1	15.6" FHD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AV0029US	i5-4200M	4GBx1	15.6" FHD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	09/13
20AV002AUS	i5-4200M	4GBx1	15.6" FHD	HM86	HD 4600	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	10/13
20AV002BUS	i5-4200M	4GBx1	15.6" FHD	HM86	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	09/13
20AV002GUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002HUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002JUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002KUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	180G SSD OPAL	Intel 6235	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	10/13
20AV002LUS	i5-4300M	4GBx1	15.6" FHD	QM87	HD 4600	720p	180G SSD OPAL	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	10/13
20AV002MUS	i5-4300M	4GBx1	15.6" FHD	QM87	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002NUS	i7-4600M	4GBx1	15.6" FHD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13

• For detailed platform specifications, please see [ThinkPad L540 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack															
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset															
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card				ExpressCard	<i>HM86 model:</i> One slot (ExpressCard/34, ExpressCard/54)															
M.2 SSD					Smart Card Read	<i>Optional:</i> Smart Card reader															
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)															
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector															
Graphics	Intel HD Graphics 4600 in processor				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card															
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS															
ThinkLight™	None				SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider															
Dimensions ³	<i>HD (WxDxH):</i> 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm <i>FHD (WxDxH):</i> 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm				Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter <i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville) <i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)															
Weight ²	<table><tr><td><i>Models</i></td><td><i>6-cell 48Wh</i></td><td><i>6-cell 56Wh</i></td><td><i>9-cell 99.9Wh</i></td></tr><tr><td><i>HD</i></td><td>5.54lb / 2.52kg</td><td>5.60lb / 2.54kg</td><td>5.95lb / 2.70kg</td></tr><tr><td><i>FHD</i></td><td>5.68lb / 2.58kg</td><td>5.73lb / 2.60kg</td><td>6.08lb / 2.76kg</td></tr></table>				<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	<i>HD</i>	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg	<i>FHD</i>	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg	Security	Power-on password, hard disk password, supervisor password, security keyhole			
<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>																		
<i>HD</i>	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg																		
<i>FHD</i>	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg																		
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic				Security chip	Trusted Platform Module, TCG 1.2-compliant															
Battery - type	Li-Ion 6-cell (48Wh or 56Wh) or 9-cell (99.9Wh), HW Authentication				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models															
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell 48Wh</i></td><td><i>6-cell 56Wh</i></td><td><i>9-cell 99.9Wh</i></td></tr><tr><td><i>Win7 (MobileMark® 2007)</i></td><td>9 hr</td><td>11 hr</td><td>19 hr</td></tr><tr><td><i>Win8 (MobileMark 2012)</i></td><td>6 hr</td><td>7 hr</td><td>12 hr</td></tr></table>				<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	<i>Win7 (MobileMark® 2007)</i>	9 hr	11 hr	19 hr	<i>Win8 (MobileMark 2012)</i>	6 hr	7 hr	12 hr	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor			
<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>																		
<i>Win7 (MobileMark® 2007)</i>	9 hr	11 hr	19 hr																		
<i>Win8 (MobileMark 2012)</i>	6 hr	7 hr	12 hr																		
AC adapter	65-watt AC adapter				Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit															
					Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite															

See footnotes for more detailed information

ThinkPad L540 20AV (TopSeller) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AV002PUS	i7-4600M	4GBx1	15.6" FHD	QM87	HD 4600	720p	1T 5400	7260 ac	16GB	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002QUS	i7-4600M	4GBx1	15.6" FHD	QM87	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002RUS	i5-4300M	4GBx1	15.6" FHD	QM87	HD 4600	720p	500G 7200	7260 ac	EM7355	select	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002SUS	i5-4300M	4GBx1	15.6" FHD	QM87	HD 4600	720p	128G SSD	7260 ac	EM7355	select	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002TUS	i7-4600M	4GBx1	15.6" FHD	QM87	HD 4600	720p	500G 7200	7260 ac	EM7355	select	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AV002UUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	None	500G 7200	7260 ac	upg	None	Finger	Smart	6(48wh)	Win7 P64 DG Win8	3-Depot	No	11/13
20AV000TUS	i7-4600M	8GBx1	15.6" HD	QM87	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	Smart	9	Win7 P64	3-Depot	No	09/13

• For detailed platform specifications, please see [ThinkPad L540 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack															
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset															
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in				ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)															
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS				Smart Card Read	<i>Optional:</i> Smart Card reader															
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)															
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio				Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector															
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card															
Graphics	Intel HD Graphics 4600 in processor				WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS															
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider															
ThinkLight™	None				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter															
Dimensions ³	<i>HD (WxDxH):</i> 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm <i>FHD (WxDxH):</i> 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm				Ethernet	HM86 model: Intel Ethernet Connection I217-V (Clarkville) QM87 model: Intel Ethernet Connection I217-LM (Clarkville)															
Weight ²	<table><tr><td><i>Models</i></td><td><i>6-cell 48Wh</i></td><td><i>6-cell 56Wh</i></td><td><i>9-cell 99.9Wh</i></td></tr><tr><td><i>HD</i></td><td>5.54lb / 2.52kg</td><td>5.60lb / 2.54kg</td><td>5.95lb / 2.70kg</td></tr><tr><td><i>FHD</i></td><td>5.68lb / 2.58kg</td><td>5.73lb / 2.60kg</td><td>6.08lb / 2.76kg</td></tr></table>				<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	<i>HD</i>	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg	<i>FHD</i>	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg	Security	Power-on password, hard disk password, supervisor password, security keyhole			
<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>																		
<i>HD</i>	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg																		
<i>FHD</i>	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg																		
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic				Security chip	Trusted Platform Module, TCG 1.2-compliant															
Battery - type	Li-Ion 6-cell (<i>48Wh</i> or <i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models															
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell 48Wh</i></td><td><i>6-cell 56Wh</i></td><td><i>9-cell 99.9Wh</i></td></tr><tr><td><i>Win7 (MobileMark® 2007)</i></td><td>9 hr</td><td>11 hr</td><td>19 hr</td></tr><tr><td><i>Win8 (MobileMark 2012)</i></td><td>6 hr</td><td>7 hr</td><td>12 hr</td></tr></table>				<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	<i>Win7 (MobileMark® 2007)</i>	9 hr	11 hr	19 hr	<i>Win8 (MobileMark 2012)</i>	6 hr	7 hr	12 hr	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor			
<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>																		
<i>Win7 (MobileMark® 2007)</i>	9 hr	11 hr	19 hr																		
<i>Win8 (MobileMark 2012)</i>	6 hr	7 hr	12 hr																		
AC adapter	65-watt AC adapter				Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit															
					Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite															

See footnotes for more detailed information

ThinkPad L540 20AU

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AU002NUS	i5-4300M	4GBx1	15.6" FHD	HM86	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002PUS	i7-4702MQ	8GBx1	15.6" FHD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002QUS	i5-4330M	4GBx1	15.6" HD	HM86	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002RUS	i5-4330M	4GBx1	15.6" HD	HM86	HD 4600	720p	1T 5400	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002SUS	i5-4330M	4GBx1	15.6" HD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002TUS	i7-4702MQ	8GBx1	15.6" HD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002VUS	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002WUS	i5-4300M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU002XUS	i3-4000M	2GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0030US	i7-4702MQ	8GBx1	15.6" FHD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0032US	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0033US	i5-4300M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0034US	i5-4330M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0035US	i5-4300M	4GBx1	15.6" HD	HM86	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0036US	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	Intel 6235	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0037US	i7-4702MQ	8GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU0039US	i7-4702MQ	8GBx1	15.6" FHD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU003BUS	i7-4702MQ	8GBx1	15.6" HD	HM86	HD 4600	720p	1T 5400	Intel 6235	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU003CUS	i5-4300M	4GBx1	15.6" HD	HM86	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU003EUS	i3-4000M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU003FUS	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU003JUS	i5-4200M	4GBx1	15.6" HD	HM86	HD 4600	720p	128G SSD	Intel 6235	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU003LUS	i7-4702MQ	8GBx1	15.6" FHD	HM86	HD 4600	720p	256G SSD OPAL	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	Yes	09/13

• For detailed platform specifications, please see [ThinkPad L540 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset			
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in				ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)			
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high				Smart Card Read	<i>Optional:</i> Smart Card reader			
M.2 SSD	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card				Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card			
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card			
Graphics	Intel HD Graphics 4600 in processor					<i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card			
						<i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card			
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad				WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable			
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch					<i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS			
ThinkLight™	None				SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider			
Dimensions ³	<i>HD (WxDxH):</i> 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm					<i>select:</i> User selectable, contract required with service provider			
	<i>FHD (WxDxH):</i> 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Weight ²					Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville)			
	<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>		<i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)			
	<i>HD</i>	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg					
	<i>FHD</i>	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg					
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic				Security	Power-on password, hard disk password, supervisor password, security keyhole			
Battery - type	Li-Ion 6-cell (<i>48Wh</i> or <i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication				Security chip	Trusted Platform Module, TCG 1.2-compliant			
Battery - life ¹⁰	<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models			
	<i>Win7 (MobileMark® 2007)</i>	9 hr	11 hr	19 hr	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor			
	<i>Win8 (MobileMark 2012)</i>	6 hr	7 hr	12 hr	Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit			
						<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit			
AC adapter	65-watt AC adapter					<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit			
					Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			

See footnotes for more detailed information

ThinkPad L540 20AU - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Chipset	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AU003MUS	i7-4702MQ	8GBx1	15.6" FHD	HM86	HD 4600	720p	1T 5400	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	Yes	09/13
20AU005YUS	i7-4600M	8GBx1	15.6" FHD	QM87	HD 4600	720p	500G 7200	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AU0060US	i7-4600M	8GBx1	15.6" FHD	QM87	HD 4600	720p	180G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AU0061US	i7-4600M	8GBx1	15.6" FHD	QM87	HD 4600	720p	256G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AU0062US	i5-4300M	4GBx1	15.6" FHD	QM87	HD 4600	720p	500G 7200	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AU0063US	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 a/b/g/n	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AU000YUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU001EUS	i5-4330M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU002UUS	i5-4330M	4GBx1	15.6" HD	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU002YUS	i7-4600M	8GBx1	15.6" FHD	QM87	HD 4600	720p	500G 7200	7260 ac	16GB	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU0031US	i5-4330M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	16GB	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU0038US	i5-4330M	8GBx1	15.6" HD	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU003AUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	Smart	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU003DUS	i5-4300M	4GBx1	15.6" HD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	None	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU003GUS	i7-4600M	4GBx1	15.6" FHD	QM87	HD 4600	720p	500G 7200	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU003HUS	i7-4600M	8GBx1	15.6" FHD	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	6(56wh)	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AU003KUS	i7-4600M	8GBx1	15.6" FHD	QM87	HD 4600	720p	128G SSD	7260 ac	upg	None	Finger	None	9	Win7 P64 DG Win8	3-Depot	Yes	11/13

• For detailed platform specifications, please see [ThinkPad L540 Platform Specifications](#) sheet

Processor	Intel® Celeron® Processor or 4th Generation Intel Core™ i3 / i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				Chipset	Mobile Intel QM87 (vPro model) or HM86 (Non-vPro model) Express Chipset			
Optical	DVD burner, 9.5mm high, fixed, not removable, tray-in				ExpressCard	HM86 model: One slot (ExpressCard/34, ExpressCard/54)			
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high				Smart Card Read	<i>Optional:</i> Smart Card reader			
M.2 SSD	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card				Ports	One Always On USB 3.0, three USB 2.0, VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 500:1 contrast ratio				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card			
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card			
Graphics	Intel HD Graphics 4600 in processor					<i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card			
						<i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card			
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad				WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable			
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch					<i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS			
ThinkLight™	None				SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider			
Dimensions ³	<i>HD (WxDxH):</i> 14.84" x 9.72" x 1.13-1.34"; 377mm x 247mm x 28.8-34.05mm					<i>select:</i> User selectable, contract required with service provider			
	<i>FHD (WxDxH):</i> 14.84" x 9.72" x 1.22-1.43"; 377mm x 247mm x 31.0-36.25mm				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Weight ²					Ethernet	<i>HM86 model:</i> Intel Ethernet Connection I217-V (Clarkville)			
	<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>		<i>QM87 model:</i> Intel Ethernet Connection I217-LM (Clarkville)			
	<i>HD</i>	5.54lb / 2.52kg	5.60lb / 2.54kg	5.95lb / 2.70kg					
	<i>FHD</i>	5.68lb / 2.58kg	5.73lb / 2.60kg	6.08lb / 2.76kg					
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic				Security	Power-on password, hard disk password, supervisor password, security keyhole			
Battery - type	Li-Ion 6-cell (<i>48Wh</i> or <i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication				Security chip	Trusted Platform Module, TCG 1.2-compliant			
Battery - life ¹⁰	<i>Models</i>	<i>6-cell 48Wh</i>	<i>6-cell 56Wh</i>	<i>9-cell 99.9Wh</i>	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models			
	<i>Win7 (MobileMark® 2007)</i>	9 hr	11 hr	19 hr	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor			
	<i>Win8 (MobileMark 2012)</i>	6 hr	7 hr	12 hr	Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit			
						<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit			
AC adapter	65-watt AC adapter					<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit			
					Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			

See footnotes for more detailed information



Lenovo® ThinkPad T430



Lenovo ThinkPad T430



Lenovo ThinkPad T430



Lenovo ThinkPad T430



Lenovo ThinkPad T430



Lenovo ThinkPad T430 with
ThinkPad Port Replicator Series 3 with USB 3.0
433615W

ThinkPad T430 2342 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload (mm/yy)	Ann Date
2342-38U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	None	No	6	iAMT	vPro	Pro 64	06/12
2342-37U	i5-3320M	4GBx2	14.0" HD	720p	320G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Pro 64	06/12
2342-36U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Pro 64	06/12
2342-35U	i5-3210M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Pro 64	06/12
2342-34U	i5-3210M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Pro 64	06/12
2342-33U	i5-3210M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Pro 64	06/12
2342-32U	i5-3210M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Pro 64	06/12
2342-4AU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Pro 64	07/12
2342-6CU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	09/12

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.7 hr; <i>9-cell (94Whr):</i> up to 16.2 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 32.5 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2	Supports ThinkVantage® technologies
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹² 1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(NZ4-1) September 2012

ThinkPad T430 2342 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2342-6FU	i5-3210M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Win7 Pro64	10/12
2342-6DU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	iAMT	vPro	Win8 Pro64	10/12
2342-49U	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Win8 Pro64	10/12
2342-48U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Win8 Pro64	10/12
2342-47U	i5-3210M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Win8 Pro64	10/12
2342-7PU	i5-3230M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	None	No	Win7 Pro64	02/13
2342-7NU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Win8 Pro64	02/13
2342-6QU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	No	6	None	No	Win7 Pro64	02/13
2342-7YU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Win7 Pro64	04/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm 6-cell: from 4.77 lb (2.17kg); 9-cell: from 5.13 lb (2.33kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 9.7 hr; 9-cell (94Whr): up to 16.2 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 32.5 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		Supports ThinkVantage® technologies
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None None Some: Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Some: Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹² 1-year - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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 (NZ4-9) April 2013

ThinkPad T430 2344 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat-Blue-tooth	tery cells	Intel AMT	Intel vPro	Preload (mm/yy)	Ann Date
2344-5NU	i7-3520M	4GBx2	14.0" HD+	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-5MU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-5LU	i7-3520M	4GBx2	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-5KU	i7-3520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-5HU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-5FU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-5EU	i5-3320M	8GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-5DU	i5-3210M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	None	None	Pro 64	06/12
2344-2HU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2344-6XU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	07/12
2344-6RU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	07/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.7 hr; <i>9-cell (94Whr):</i> up to 16.2 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 32.5 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant	Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader	Power On Authentication, supports the security chip AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹² 3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(NZ4-2) August 2012

ThinkPad T430 2344 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Blue-tooth	Battery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2344-BZU	i5-3320M	4GBx1	14.0" HD+	500G 7200	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	iAMT	vPro	Win7 Pro64	10/12
2344-BYU	i5-3320M	4GBx1	14.0" HD+	500G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Win8 Pro64	10/12
2344-BNU	i5-3320M	4GBx1	14.0" HD+	180G SSD	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win7 Pro64	10/12
2344-BKU	i5-3320M	4GBx1	14.0" HD+	500G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Win7 Pro64	10/12
2344-6ZU	i7-3520M	4GBx1	14.0" HD+	500G 7200	Backlit	Intel 2200	WWAN upg	Finger	BT	6	None	No	Win8 Pro64	10/12
2344-6YU	i5-3320M	4GBx1	14.0" HD+	180G SSD	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win8 Pro64	10/12
2344-6SU	i5-3320M	4GBx1	14.0" HD	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win8 Pro64	10/12
2344-C4U	i5-3320M	4GBx1	14.0" HD	500G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Win7 Pro64	10/12
2344-FQU	i5-3320M	4GBx1	14.0" HD+	500G 7200	Backlit	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	06/13
2344-GRU	i5-3320M	4GBx1	14.0" HD+	180G SSD	Backlit	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win8 Pro64	07/13
2344-GQU	i5-3320M	4GBx1	14.0" HD+	256G SSD OPAL	Backlit	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	07/13
2344-GPU	i5-3320M	4GBx1	14.0" HD+	256G SSD OPAL	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win7 Pro64	07/13
2344-GNU	i5-3320M	4GBx1	14.0" HD	320G 7200 OPAL	None	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	07/13
2344-GMU	i5-3320M	4GBx1	14.0" HD+	320G 7200 OPAL	None	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	07/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Adobe® Reader®• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.7 hr; <i>9-cell (94Whr):</i> up to 16.2 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 32.5 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		Supports ThinkVantage® technologies
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader			For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

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(NZ4-11) July 2013

ThinkPad T430 2342 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
2342-4BU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	6	None	Pro 64	07/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.4 hr; <i>9-cell (94Whr):</i> up to 15.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 31.6 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Wireless WAN upgradable None None None None Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 None HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

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(NZ4-8) August 2012

ThinkPad T430 2342 (Optimus) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Battery cells	Intel vPro	Preload	Ann Date (mm/yy)
2342-4CU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	6	None	Win8 Pro64	10/12

• **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system²⁰ - Windows® 8 Pro 64-bit		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive												
mSATA™ SSD	None												
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)												
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³ Weight ² Case material	<i>14.0W"</i> (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic												
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.4 hr; <i>9-cell (94Whr):</i> up to 15.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 31.6 hr												
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)										Supports ThinkVantage® technologies		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Wireless WAN upgradable None None None None Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 None HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole										90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²		
Security Security chip Fingerprint reader	None Trusted Platform Module, TCG 1.2-compliant None										For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												

See footnotes for more detailed information

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(NZ4-10) October 2012

ThinkPad T430 2344 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
2344-5PU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	vPro	Pro 64	06/12
2344-5JU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	Pro 64	06/12
2344-5GU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	Pro 64	06/12
2344-6VU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	vPro	Pro 64	07/12
2344-6TU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	vPro	Pro 64	07/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic			
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.4 hr; <i>9-cell (94Whr):</i> up to 15.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 31.6 hr			
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information

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ThinkPad T430 2344 (Optimus) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat-tery Intel vPro	Blue-tooth cells	Preload	Ann Date (mm/yy)
2344-BPU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	Win7 Pro64	10/12
2344-BMU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	Win7 Pro64	10/12
2344-6WU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	Win8 Pro64	10/12
2344-6UU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	Win8 Pro64	10/12
2344-FSU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	None	BT	9	Win7 Pro64	06/13
2344-GSU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	None	BT	9	Win7 Pro64	07/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions)• Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm 6-cell: from 4.77 lb (2.17kg); 9-cell: from 5.13 lb (2.33kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 9.4 hr; 9-cell (94Whr): up to 15.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 31.6 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth cells	Bat-tery Intel vPro	Global (G) GMP (P)	Ann Date (mm/yy)
2347-GAU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-H9U	i5-3320M	4GBx1	14.0" HD	720p	180G SSD	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-G8U	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-GBU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-G5U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-H8U	i7-3520M	4GBx1	14.0" HD	No	500G 7200	None	Intel 6205	upg	None	None	No	6 vPro	G	Pro 64 06/12
2347-H7U	i5-3320M	4GBx1	14.0" HD	No	320G 7200	None	Intel 6205	upg	None	None	No	6 vPro	G	Pro 64 06/12
2347-H6U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-H2U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-GZU	i5-3320M	4GBx1	14.0" HD	720p	128G SSD	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-G3U	i7-3520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-G2U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	upg	None	Finger	BT	6 vPro	G	Pro 64 06/12
2347-K9U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	Gobi	AT&T	Finger	BT	6 vPro	G	Pro 64 09/12
2347-K8U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	Gobi	Verizon	Finger	BT	6 vPro	G	Pro 64 09/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive										
mSATA™ SSD	None										
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio										
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)										
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic										
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.7 hr; <i>9-cell (94Whr):</i> up to 16.2 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 32.5 hr										
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)										
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 4000 chipset, PCIe Mini Card, LTE, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS										
Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> AT&T® or Verizon® LTE (4G), contract required with service provider None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack										
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip										
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available										Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

ThinkPad T430 2347 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth cells	Bat-tery	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
2347-JKU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	vPro		Win8 Pro64	10/12
2347-JGU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win8 Pro64	10/12
2347-JBU	i7-3520M	4GBx1	14.0" HD	No	500G 7200	None	Intel 6205	WWAN upg	None	No	6	vPro		Win8 Pro64	10/12
2347-JAU	i5-3320M	4GBx1	14.0" HD	No	320G 7200	None	Intel 6205	WWAN upg	None	No	6	vPro		Win8 Pro64	10/12
2347-J9U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Win8 Pro64	10/12
2347-J8U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Win8 Pro64	10/12
2347-L4U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win7 Pro64	12/12
2347-L3U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win7 Pro64	12/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.7 hr; <i>9-cell (94Whr):</i> up to 16.2 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 32.5 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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(NZ4-13) December 2012

ThinkPad T430 2347 (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat-Blue-tooth	Global (G) Intel vPro	GMP (P) Preload (mm/yy)	Ann Date
2347-G9U	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2347-G7U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2347-G6U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2347-G4U	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller												
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive												
mSATA™ SSD	None												
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)												
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm 6-cell: from 4.77 lb (2.17kg); 9-cell: from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic												
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 9.4 hr; 9-cell (94Whr): up to 15.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 31.6 hr												
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)												
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant												
Security Security chip Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available									Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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(NZ4-5) June 2012

ThinkPad T430 2347 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat- tooth cells	Intel vPro	Preload	Ann Date (mm/yy)
2347-L5U	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	vPro Win7 Pro64	12/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Adobe® Reader®• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.4 hr; <i>9-cell (94Whr):</i> up to 15.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 31.6 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole		
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available		
Supports ThinkVantage® technologies			
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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(NZ4-15) February 2013

ThinkPad T430 2349 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Mini Card Carrier	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2349-GAU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	upg	None	None	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-GDU	i5-3320M	4GBx1	14.0" HD	720p	128G SSD	None	Intel 6205	upg	None	None	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-G8U	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	upg	None	None	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-G5U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	upg	None	None	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-GCU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	upg	None	None	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-GWU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	upg	None	None	Fing	BT	6	vPro		Pro 64	06/12
2349-GVU	i7-3520M	4GBx1	14.0" HD	No	500G 7200	None	Intel 6205	upg	None	None	No	No	6	vPro		Pro 64	06/12
2349-GUU	i5-3320M	4GBx1	14.0" HD	No	320G 7200	None	Intel 6205	upg	None	None	No	No	6	vPro		Pro 64	06/12
2349-GRU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	upg	None	None	Fing	BT	6	vPro		Pro 64	06/12
2349-G3U	i7-3520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	upg	None	None	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-G2U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	upg	None	None	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-HFU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	upg	None	Smart	Fing	BT	6	vPro	G P	Pro 64	06/12
2349-HNU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	upg	None	None	No	BT	6	vPro	G P	Pro 64	07/12
2349-JTU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	Gobi	AT&T	None	Fing	BT	6	vPro		Pro 64	09/12
2349-JSU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	Gobi	Verizon	None	Fing	BT	6	vPro		Pro 64	09/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.7 hr; <i>9-cell (94Whr):</i> up to 16.2 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 32.5 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 4000 chipset, PCIe Mini Card, LTE, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS	
Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> AT&T® or Verizon® LTE (4G), contract required with service provider None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time/ service upgrades ²² available	Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

ThinkPad T430 2349 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ¹ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2349-JQU	i7-3520M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	vPro	G P	Win8 Pro64	10/12
2349-JPU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G P	Win8 Pro64	10/12
2349-JNU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G P	Win8 Pro64	10/12
2349-JMU	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G P	Win8 Pro64	10/12
2349-LTU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win7 Pro64	12/12
2349-LSU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win7 Pro64	12/12
2349-LRU	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win7 Pro64	12/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Adobe® Reader®• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Skype™ Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm 6-cell: from 4.77 lb (2.17kg); 9-cell: from 5.13 lb (2.33kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 9.7 hr; 9-cell (94Whr): up to 16.2 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 32.5 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant		
Security Security chip Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

See footnotes for more detailed information

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(NZ4-14) December 2012

ThinkPad T430 2349 (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Battery cells	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
2349-G9U	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2349-G7U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2349-G6U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2349-G4U	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12

• Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm 6-cell: from 4.77 lb (2.17kg); 9-cell: from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 9.4 hr; 9-cell (94Whr): up to 15.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 31.6 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T430 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad T430 2349 (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat-Blue- tooth cells	Intel vPro	Preload	Ann Date (mm/yy)
2349-LUU	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	vPro Win7 Pro64	12/12

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions)• Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.4 hr; <i>9-cell (94Whr):</i> up to 15.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 31.6 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	

Supports ThinkVantage® technologies	
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²	
For compatible accessories, please go to O-T430 sheet;	
For Lenovo service²² upgrade options, please go to S-TA sheet	

See footnotes for more detailed information

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ThinkPad T430 Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann	06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann	06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann	06/05/12

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive 12.7mm Bay Adapter III	0A65623	ann	02/28/12
DVD Burner Ultrabay Enhanced Drive III	0A65625	ann	06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann	12/11/12
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65631	ann	06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65632	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65635	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm			
Self Encrypting (SED) OPAL Capable HDD ⁴¹	0A65636	ann	08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65629	ann	06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65630	ann	06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD ⁴¹	0A65620	ann	05/15/12

⁴¹ Can be used as the main HDD or with
Serial ATA Hard Drive 12.7mm Bay Adapter III 0A65623 in the Ultrabay.

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 3000 Mobile Broadband	0A36185	ann	04/12/11
ThinkPad Gobi 4000 Mobile Broadband - AT&T®	0A36320	ann	06/05/12
ThinkPad Gobi 4000 Mobile Broadband - Verizon®	0A36318	ann	06/26/12

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3 with USB 3.0	433615W	ann	06/05/12
ThinkPad Mini Dock Series 3 - 90W	433710U	ann	06/23/09
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W	433715U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W	433815U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann	06/05/12

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

3M 14.0W Privacy Filter from Lenovo	0A61769	ann	04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 70+ (6-cell)	0A36302	ann	06/05/12
ThinkPad Battery 70++ (9-cell)	0A36303	ann	06/05/12
ThinkPad Battery 28++ (9 cell, slice) ⁴³	0A36304	ann	06/05/12

⁴³ To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
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⁴⁴ Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
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⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) ⁶⁹	2578HB6	ann	10/20/09

⁶⁹ DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann	08/16/11

More information at www.lenovo.com/support/monitors
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann	08/14/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann	05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann	06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann	07/24/12
Lenovo USB Soundbar	0A36190	ann	05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

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Lenovo® ThinkPad T430s



Lenovo ThinkPad T430s



Lenovo ThinkPad T430s with
Lenovo Essential Notebook Stand 45J9292,
notebook, keyboard and mouse



Lenovo ThinkPad T430s with
USB 3.0 Secure 750GB Hard Drive
0A65616



Lenovo ThinkPad T430s



Lenovo ThinkPad T430s with
USB 3.0 Secure 750GB Hard Drive
0A65616

ThinkPad T430s 2352 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB ⁸ rpm	Optical or Blank bezel	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bay battery cells	Bat-tery cells	Intel AMT	Intel vPro	Pre-load	Ann Date (mm/yy)
2352-2KU	i5-3320M	4GBx1	14.0" HD+	128G SSD	Blank bezel	None	Intel 6205 ²⁸	upg	Finger	3	6	iAMT	vPro	Pro 64	06/12
2352-2JU	i5-3320M	4GBx1	14.0" HD+	320G 7200	DVD±RW	None	TP 11b/g/n	upg	None	No	6	None	None	Pro 64	06/12

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Bay battery Ultrabay SATA disk	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable <i>Some:</i> ThinkPad Battery 43 (3-cell, bay) (0A36310), used in Option Bay One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>14.0W" (WxDxH):</i> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm <i>6-cell:</i> from 3.96 lb (1.79kg) <i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication <i>6-cell (43.2Whr):</i> up to 7.6 hr; <i>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</i> up to 13.2 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort (Mini DP / Thunderbolt™ combo port on i7 integrated model, switch via BIOS)		
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		Supports ThinkVantage® technologies
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-T430-S sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹² 1-year - depot repair service / service upgrades ²² available			

See footnotes for more detailed information

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ThinkPad T430s 2353 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB ⁸ rpm	Optical or battery	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Bat-tery cells	Power Adapter (watt)	Intel vPro	Preload (mm/yy)	Ann Date
2353-2NU	i7-3520M	4GBx1	14.0" HD+	180G SSD	DVD±RW	None	Intel 6205 ²⁸	WWAN upg	Finger	6	90W	vPro	Pro 64	06/12
2353-2MU	i5-3320M	4GBx1	14.0" HD+	500G 7200	DVD±RW	None	Intel 6205	WWAN upg	Finger	6	65W	vPro	Pro 64	06/12
2353-2LU	i5-3320M	4GBx1	14.0" HD+	128G SSD	DVD±RW	None	Intel 6205	WWAN upg	Finger	6	65W	vPro	Pro 64	06/12
2353-6GU	i7-3520M	4GBx1	14.0" HD+	500G 7200	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	65W	vPro	Pro 64	07/12
2353-6FU	i7-3520M	4GBx1	14.0" HD+	180G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	65W	vPro	Pro 64	07/12
2353-6DU	i5-3320M	4GBx1	14.0" HD+	180G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	65W	vPro	Pro 64	07/12
2353-6AU	i5-3320M	4GBx1	14.0" HD+	128G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	65W	vPro	Pro 64	07/12
2353-69U	i5-3320M	4GBx1	14.0" HD+	500G 7200	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	65W	vPro	Pro 64	07/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology			Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable None			
Ultrabay SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard TrackPoint®	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight			
Touchpad	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass			
ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm			
Weight ²	6-cell: from 3.96 lb (1.79kg)			
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy			
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication			
Battery - life ¹⁰	6-cell (43.2Whr): up to 7.6 hr; 6-cell plus 3-cell Bay battery (31.3Whr, 0A36310): up to 13.2 hr			
Chipset	Mobile Intel QM77 Express Chipset			
ExpressCard	One slot (ExpressCard/34)			
Smart Card Read	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter			
Ports	Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort (Mini DP / Thunderbolt™ combo port on i7 integrated model, switch via BIOS)			
PCIe Mini Card	Two PCI Express Mini Card slots			
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2			
PCIe WWAN	Wireless WAN upgradable			
Carrier	None			
Modem	None			
IEEE 1394	None			
Bluetooth™	Bluetooth 4.0 wireless			
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1			
Intel AMT	Intel Active Management Technology (iAMT)			
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole			
Security	Trusted Platform Module, TCG 1.2-compliant			
Security chip	Power On Authentication, supports the security chip			
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies			
65-watt or 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
For compatible accessories, please go to O-T430-S sheet;			
For Lenovo service²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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(SN4-2) November 2012

ThinkPad T430s 2353 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB ⁸ rpm	Optical or battery	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
2353-9VU	i7-3520M	4GBx1	14.0" HD+	500G 7200	DVD±RW	None	Intel 6205 ²⁸	WWAN upg	Finger	6	vPro	Win7 Pro64	10/12
2353-9MU	i5-3320M	4GBx1	14.0" HD+	128G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win7 Pro64	10/12
2353-9LU	i5-3320M	4GBx1	14.0" HD+	500G 7200	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win7 Pro64	10/12
2353-6HU	i7-3520M	4GBx1	14.0" HD+	500G 7200	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win8 Pro64	10/12
2353-6EU	i7-3520M	4GBx1	14.0" HD+	180G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win8 Pro64	10/12
2353-6CU	i5-3320M	4GBx1	14.0" HD+	180G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win8 Pro64	10/12
2353-6BU	i5-3320M	4GBx1	14.0" HD+	128G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win8 Pro64	10/12
2353-68U	i5-3320M	4GBx1	14.0" HD+	500G 7200	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win8 Pro64	10/12
2353-B5U	i5-3320M	4GBx1	14.0" HD+	128G SSD	DVD±RW	Backlit	Intel 6205	WWAN upg	None	6	vPro	Win7 Pro64	07/13
2353-B4U	i5-3320M	4GBx1	14.0" HD+	500G 7200	DVD±RW	Backlit	Intel 6205	WWAN upg	None	6	vPro	Win8 Pro64	07/13
2353-AZU	i5-3320M	4GBx1	14.0" HD+	256G SSD OPAL	DVD±RW	Backlit	Intel 6205	WWAN upg	None	6	vPro	Win7 Pro64	07/13
2353-AYU	i5-3320M	4GBx1	14.0" HD+	256G SSD OPAL	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	6	vPro	Win7 Pro64	07/13
2353-AXU	i5-3320M	4GBx1	14.0" HD+	320G 7200 OPAL	DVD±RW	Backlit	Intel 6205	WWAN upg	None	6	vPro	Win7 Pro64	07/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology								Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller								Preloaded applications⁵ (only some listed)				
Optical Bay battery Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable None One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive								- Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
mSATA™ SSD	None								- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)				
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio								- All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™				
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)												
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm 6-cell: from 3.96 lb (1.79kg) Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication 6-cell (43.2Whr): up to 7.6 hr; 6-cell plus 3-cell Bay battery (31.3Whr, 0A36310): up to 13.2 hr												
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort (Mini DP / Thunderbolt™ combo port on i7 integrated model, switch via BIOS)												
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole												
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available								Supports ThinkVantage® technologies				
									65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
									For compatible accessories, please go to O-T430-S sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

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(SN4-8) July 2013

ThinkPad T430s 2353 (Optimus) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ¹ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Battery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2353-9WU	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	6	iAMT	vPro	Win7 Pro64	10/12
2353-9KU	i5-3210M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	6	None	No	Win7 Pro64	10/12
2353-67U	i5-3210M	4GBx1	14.0" HD	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	6	None	No	Win8 Pro64	10/12
2353-ALU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	6	None	No	Win8 Pro64	02/13
2353-ABU	i5-3230M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	6	None	No	Win7 Pro64	02/13
2353-B7U	i5-3230M	4GBx1	14.0" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	None	6	None	No	Win7 Pro64	07/13
2353-B6U	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	Backlit	Intel 6205	WWAN upg	None	6	iAMT	vPro	Win7 Pro64	07/13
2353-B3U	i7-3520M	4GBx1	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6205	WWAN upg	Finger	6	iAMT	vPro	Win7 Pro64	07/13
2353-B2U	i7-3520M	4GBx1	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6205	WWAN upg	None	6	iAMT	vPro	Win7 Pro64	07/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none"> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none"> • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™ 				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller														
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable														
Ultrabay	None														
SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5200M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort or Thunderbolt (i7 integrated models); supports three independent displays; <i>Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)</i>														
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight														
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass														
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch														
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm														
Weight ²	6-cell: from 3.96 lb (1.79kg)														
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy														
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication														
Battery - life ¹⁰	6-cell (43.2Whr): up to 7.6 hr; 6-cell plus 3-cell Bay battery (31.3Whr, 0A36310): up to 13.2 hr														
Chipset	Mobile Intel QM77 Express Chipset														
ExpressCard	One slot (ExpressCard/34)														
Smart Card Read	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter														
Ports	Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort														
PCIe Mini Card	Two PCI Express Mini Card slots														
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2														
PCIe WWAN	Wireless WAN upgradable														
Carrier	None														
Modem	None														
IEEE 1394	None														
Bluetooth™	Bluetooth 4.0 wireless														
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1														
Intel AMT	Some: Intel Active Management Technology (iAMT)														
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available														

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(SN4-9) July 2013

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ¹ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Bat- tery cells	Bay battery cells	Global (G) Intel GMP vPro (P)	Pre-load	Ann Date (mm/yy)
2355-HMU	i7-3520M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205 ²⁸	WWAN upg	None	Finger	6	No	vPro G	Pro 64	06/12
2355-HLU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	None	Finger	6	No	vPro G	Pro 64	06/12
2355-HKU	i7-3520M	4GBx2	14.0" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	None	Finger	6	No	vPro G	Pro 64	06/12
2355-HFU	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	WWAN upg	None	Finger	6	No	vPro G	Pro 64	06/12
2355-HEU	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	Gobi 3000	select	Finger	6	No	vPro	Pro 64	06/12
2355-HDU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	None	Finger	6	3	vPro G	Pro 64	06/12
2355-HCU	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	WWAN upg	None	Finger	6	3	vPro	Pro 64	06/12
2355-GUU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	None	None	6	No	vPro	Pro 64	06/12
2355-GTU	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	None	Intel 6205	WWAN upg	None	None	6	No	vPro	Pro 64	06/12
2355-GMU	i7-3520M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	None	None	6	No	vPro	Pro 64	06/12
2355-G3U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	None	Finger	6	No	vPro G	Pro 64	06/12
2355-G2U	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	None	Finger	6	No	vPro G	Pro 64	06/12
2355-K8U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	Gobi 4000	AT&T	Finger	6	No	vPro	Pro 64	09/12

• A depot repair service 3-year limited warranty

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller														
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable														
Ultrabay	Some: ThinkPad Battery 43 (3-cell, bay) (0A36310), used in Option Bay														
SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access														
	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high														
	Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™														
mSATA™ SSD	All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
None															
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	Some: HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)														
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight														
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass														
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch														
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm														
Weight ²	6-cell: from 3.96 lb (1.79kg)														
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy														
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication														
Battery - life ¹⁰	6-cell (43.2Whr): up to 7.6 hr; 6-cell plus 3-cell Bay battery (31.3Whr, 0A36310): up to 13.2 hr														
Chipset	Mobile Intel QM77 Express Chipset														
ExpressCard	One slot (ExpressCard/34)														
Smart Card Reader	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter														
Ports	Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort (Mini DP / Thunderbolt™ combo port on i7 integrated model, switch via BIOS)														
PCIe Mini Card	Two PCI Express Mini Card slots														
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2														
PCIe WWAN	Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS Some: Wireless WAN, Qualcomm Gobi™ 4000 chipset, PCIe Mini Card, LTE, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS														
Carrier	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider Some: AT&T® LTE (4G), contract required with service provider														
Modem	None														
IEEE 1394	None														
Bluetooth™	Bluetooth 4.0 wireless														
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														
											Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T430-S sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

ThinkPad T430s 2355 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Battery cells	Bay battery cells	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
2355-K7U	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	6	No	vPro	G	Win8 Pro64	10/12
2355-JQU	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	6	No	vPro		Win8 Pro64	10/12
2355-JCU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	6	No	vPro		Win8 Pro64	10/12
2355-KNU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	6	No	vPro		Win7 Pro64	12/12
2355-KMU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	6	No	vPro		Win7 Pro64	12/12

• A depot repair service 3-year limited warranty

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller														
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable														
Ultrabay SATA disk	None One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)														
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight														
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass														
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch														
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm														
Weight ²	6-cell: from 3.96 lb (1.79kg)														
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy														
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication														
Battery - life ¹⁰	6-cell (43.2Whr): up to 7.6 hr; 6-cell plus 3-cell Bay battery (31.3Whr, 0A36310): up to 13.2 hr														
Chipset	Mobile Intel QM77 Express Chipset														
ExpressCard	One slot (ExpressCard/34)														
Smart Card Reader	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter														
Ports	Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort (Mini DP / Thunderbolt™ combo port on i7 integrated model, switch via BIOS)														
PCIe Mini Card	Two PCI Express Mini Card slots														
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2														
PCIe WWAN	Wireless WAN upgradable														
Carrier	None														
Modem	None														
IEEE 1394	None														
Bluetooth™	Bluetooth 4.0 wireless														
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Push-on password, hard disk password, supervisor password, security keyhole														
Security	Trusted Platform Module, TCG 1.2-compliant														
Security chip	Power On Authentication, supports the security chip														
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information

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ThinkPad T430s 2355 (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Optical or battery	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) MFP (P)	Pre-load	Ann Date (mm/yy)
2355-HJU	i5-3320M	4GBx2	14.0" HD+	720p	180G SSD	DVD±RW	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	vPro	G	Pro 64	06/12
2355-HHU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Pro 64	06/12
2355-HGU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	DVD±RW	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Pro 64	06/12

- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable	Preloaded applications ¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™
Ultrabay	None	• Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, and Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5200M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort or Thunderbolt (i7 integrated models); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight	
TrackPoint®	TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm	
Weight ²	6-cell: from 3.96 lb (1.79kg)	
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy	
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication	
Battery - life ¹⁰	6-cell (43.2Whr): up to 7.6 hr; 6-cell plus 3-cell Bay battery (31.3Whr, 0A36310): up to 13.2 hr	
Chipset	Mobile Intel QM77 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card Read	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter	
Ports	Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort	
PCIe Mini Card	Two PCI Express Mini Card slots	Supports ThinkVantage® technologies
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	90-watt AC adapter
PCIe WWAN	Wireless WAN upgradable	ThinkPad Roll Cage (one-piece magnesium frame)
Carrier	None	EPEAT™ Silver rating
Modem	None	ENERGY STAR® 5.0-compliant
IEEE 1394	None	GREENGUARD® certified
Bluetooth™	Bluetooth 4.0 wireless	RoHS-compliant
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	International Warranty Service ¹⁷
Intel AMT	Intel Active Management Technology (iAMT)	24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	For compatible accessories, please go to O-T430-S sheet;
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

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(SN4-4) November 2012

ThinkPad T430s 2355 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB/s rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Bat-tery cells	Global (G) Intel vPro GMP (P)			Ann Date (mm/yy)
2355-K6U	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	6	vPro	G	Win8 Pro64	10/12
2355-JEU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	6	vPro		Win8 Pro64	10/12
2355-SUA	i7-3520M	4GBx1	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6205	WWAN upg	Finger	6	vPro		Win7 Pro64	12/12

- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	Preloaded applications ⁵ (only some listed)
Optical Bay battery Ultrabay SATA disk mSATA™ SSD	DVD burner, 9.5mm Ultrabay slim, removable None One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive None	- Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	- All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5200M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort or Thunderbolt (i7 integrated models); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>14.0W" (WxDxH):</i> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm <i>6-cell:</i> from 3.96 lb (1.79kg) <i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication <i>6-cell (43.2Whr):</i> up to 7.6 hr; <i>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</i> up to 13.2 hr	
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	Supports ThinkVantage® technologies
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	For compatible accessories, please go to O-T430-S sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad T430s 2356 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Optical or battery	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger-print reader	Bat-tery cells vPro	Global (G) GMP (P)	Pre-load (mm/yy)	Ann Date
2356-HCU	i7-3520M	4GBx1	14.0" HD	720p	500G 7200	DVD±RW	None	Intel 6205 ²⁸	WWAN upg	None	Finger	6	vPro G P	Pro 64	06/12
2356-HBU	i7-3520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	None	Finger	6	vPro G P	Pro 64	06/12
2356-HAU	i7-3520M	4GBx2	14.0" HD+	720p	180G SSD	DVD±RW	None	Intel 6205	WWAN upg	None	Finger	6	vPro G P	Pro 64	06/12
2356-GUU	i7-3520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	None	None	6	vPro G P	Pro 64	06/12
2356-GTU	i5-3320M	4GBx1	14.0" HD+	None	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	None	Finger	6	vPro G P	Pro 64	06/12
2356-GRU	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	None	Intel 6205	WWAN upg	None	Finger	6	vPro G P	Pro 64	06/12
2356-GPU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	None	None	6	vPro G P	Pro 64	06/12
2356-GJU	i5-3320M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	None	Intel 6205	WWAN upg	None	None	6	vPro G P	Pro 64	06/12
2356-G3U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	DVD±RW	None	Intel 6205	WWAN upg	None	Finger	6	vPro G P	Pro 64	06/12
2356-G2U	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	None	Finger	6	vPro G P	Pro 64	06/12

• Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ Genuine Windows® 7 Professional 64				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager				
Optical Bay battery Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable None One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive										Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
mSATA™ SSD	None														
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)														
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>14.0W"</i> (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm <i>6-cell:</i> from 3.96 lb (1.79kg) <i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication <i>6-cell (43.2Whr):</i> up to 7.6 hr; <i>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</i> up to 13.2 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort (Mini DP / Thunderbolt™ combo port on i7 integrated model, switch via BIOS)														
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole										Supports ThinkVantage® technologies				
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip										65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available										For compatible accessories, please go to O-T430-S sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

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ThinkPad T430s 2356 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Battery cells	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2356-LDU	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	6	vPro	G P	Win8 Pro64	10/12
2356-LAU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	6	vPro	G P	Win8 Pro64	10/12
2356-MHU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	6	vPro		Win7 Pro64	12/12
2356-MGU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	6	vPro		Win7 Pro64	12/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable None		
Ultrabay SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint®	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight		
Touchpad ThinkLight™	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	<i>14.0W" (WxDxH):</i> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm		
Weight ²	<i>6-cell:</i> from 3.96 lb (1.79kg)		
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy		
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication		
Battery - life ¹⁰	<i>6-cell (43.2Whr):</i> up to 7.6 hr; <i>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</i> up to 13.2 hr		
Chipset	Mobile Intel QM77 Express Chipset		
ExpressCard	One slot (ExpressCard/34)		
Smart Card Read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter		
Ports	Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort (Mini DP / Thunderbolt™ combo port on i7 integrated model, switch via BIOS)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
PCIe WWAN	Wireless WAN upgradable		
Carrier	None		
Modem	None		
IEEE 1394	None		
Bluetooth™	Bluetooth 4.0 wireless		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		
Supports ThinkVantage® technologies			
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
For compatible accessories, please go to O-T430-S sheet;			
For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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ThinkPad T430s 2356 (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Optical or battery	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/msATA	Finger print reader	Blue-tooth	Bat-teries vPro	Global (G) GMP (P)	Pre-load	Ann Date (mm/yy)
2356-H9U	i5-3320M	4GBx2	14.0" HD+	720p	180G SSD	DVD±RW	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	6 vPro	G P	Pro 64	06/12
2356-H8U	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	Finger	BT	6 vPro	G P	Pro 64	06/12
2356-H7U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	DVD±RW	None	Intel 6205	WWAN upg	Finger	BT	6 vPro	G P	Pro 64	06/12

- *Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty*

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable	Preloaded applications ¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Ultrabay SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, and Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5200M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort or Thunderbolt (i7 integrated models); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	<i>14.0W" (WxDxH):</i> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm	
Weight ²	<i>6-cell:</i> from 3.96 lb (1.79kg)	
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy	
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication	
Battery - life ¹⁰	<i>6-cell (43.2Whr):</i> up to 7.6 hr; <i>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</i> up to 13.2 hr	
Chipset	Mobile Intel QM77 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card Read	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter	
Ports	Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort	
PCIe Mini Card	Two PCI Express Mini Card slots	Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
PCIe WWAN	Wireless WAN upgradable	
Carrier	None	
Modem	None	
IEEE 1394	None	
Bluetooth™	Bluetooth 4.0 wireless	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For compatible accessories, please go to O-T430-S sheet;
Limited warranty ¹²	3-years /1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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(SN4-6) November 2012

ThinkPad T430s 2356 (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger-print reader	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2356-LCU	i5-3320M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	6	vPro	G P	Win8 Pro64	10/12
2356-LBU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	6	vPro	G P	Win8 Pro64	10/12
2356-L9U	i7-3520M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	6	vPro		Win8 Pro64	10/12
2356-MJU	i7-3520M	4GBx1	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6205	WWAN upg	Finger	6	vPro		Win7 Pro64	12/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Bay battery Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable None One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5200M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort or Thunderbolt (i7 integrated models); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm 6-cell: from 3.96 lb (1.79kg) <i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication 6-cell (43.2Whr): up to 7.6 hr; 6-cell plus 3-cell Bay battery (31.3Whr, 0A36310): up to 13.2 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) via ExpressCard adapter Two USB 3.0, one powered USB 2.0, ethernet (RJ-45), VGA DB-15, Mini DisplayPort		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole		
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

For compatible accessories, please go to O-T430-S sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

ThinkPad T430s Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann	06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann	06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann	06/05/12

Ultrabay Slim 9.5mm

Serial ATA Hard Drive 9.5mm Bay Adapter III	43N3412	ann	06/23/09
DVD ROM Ultrabay Slim Drive III	0A65628	ann	06/05/12
DVD Burner Ultrabay Slim Drive III	0A65626	ann	06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann	12/11/12
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65631	ann	06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65632	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65635	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm			
Self Encrypting (SED) OPAL Capable HDD ⁴¹	0A65636	ann	08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65629	ann	06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65630	ann	06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD ⁴¹	0A65620	ann	05/15/12

⁴¹ Can be used as the main HDD or with

Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 3000 Mobile Broadband	0A36185	ann	04/12/11
ThinkPad Gobi 4000 Mobile Broadband - AT&T®	0A36320	ann	06/05/12
ThinkPad Gobi 4000 Mobile Broadband - Verizon®	0A36318	ann	06/26/12

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3 with USB 3.0	433615W	ann	06/05/12
ThinkPad Mini Dock Series 3 - 90W	433710U	ann	06/23/09
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W	433715U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W	433815U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann	06/05/12

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

3M 14.0W Privacy Filter from Lenovo	0A61769	ann	04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 81+ (6-cell)	0A36309	ann	06/05/12
ThinkPad Battery 43 (3-cell, bay) ⁴²	0A36310	ann	06/05/12
⁴² Used in Ultrabay Slim bay.			
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
⁴⁴ Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.			

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
⁴⁵ Only compatible with the integrated graphics models.			
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:

ThinkPad Ultralight Backpack	0B47306	ann	12/11/12
ThinkPad Ultralight Topload	0B47307	ann	12/11/12

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) ⁶⁹	2578HB6	ann	10/20/09
⁶⁹ DisplayPort cable is not included.			
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann	08/16/11

More information at www.lenovo.com/support/monitors
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann	08/14/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann	05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann	06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann	07/24/12
Lenovo USB Soundbar	0A36190	ann	05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad T430u



Lenovo ThinkPad T430u



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Lenovo ThinkPad T430u

ThinkPad T430u 3351 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
3351-8EU	i5-3317U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	None	BT	3	Win7 Pro64	10/12
3351-7BU	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	Intel 2230	24GB mSATA	Finger	BT	3	Win8 Pro64	10/12
3351-7AU	i5-3317U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3	Win8 Pro64	10/12
3351-B4U	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	Intel 2230	24GB mSATA	Finger	BT	3	Win7 Pro64	02/13
3351-B3U	i5-3337U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	None	BT	3	Win8 Pro64	02/13
3351-B2U	i5-3337U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	None	BT	3	Win7 Pro64	02/13
3351-99U	i5-3337U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	None	BT	3	Win7 Pro64	02/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology							Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™				
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™											
mSATA™ SSD	mSATA Solid State Drive (SSD), via PCIe Mini Card slot											
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio											
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus											
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; Maximum external resolution: 2560x1600 (Mini-DisplayPort or HDMI) @60Hz											
Keyboard	6-row, spill-resistant, multimedia Fn keys											
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³											
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions ³	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm											
Weight ²	3-cell: from 4.08 lb (1.85kg)											
Case material	Display cover: Aluminum; Bottom: Glass-Fiber Reinforced Plastic											
Battery - type	Integrated Li-Polymer 3-cell											
Battery - life ¹⁰	3-cell (47Whr): up to 7.1 hr											
Chipset	Mobile Intel UM77 Express Chipset											
ExpressCard	None											
Smart Card read	None											
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)											
PCIe Mini Card	Two PCI Express Mini Card slots											
PCIe WLAN ⁴	Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + Bluetooth combo adapter											
PCIe WWAN	None											
Carrier	None											
Modem	None											
IEEE 1394	None											
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter											
Ethernet	Realtek® RTL8111F Gigabit Network Connection											
Intel AMT	None											
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack											
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	Trusted Platform Module, TCG 1.2-compliant											
Fingerprint reader	Some: AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip											
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											

See footnotes for more detailed information

US model(s) withdrawn effective March 2013

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(ABBA1-7) June 2013

ThinkPad T430u 8614 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
8614-45U	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	Pro 64	08/12
8614-3KU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	Pro 64	08/12
8614-3JU	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3	Pro 64	08/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology							Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64				
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager				
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™							Preloaded applications ¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials				
mSATA™ SSD	<i>Some:</i> mSATA Solid State Drive (SSD), via PCIe Mini Card slot											
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio											
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus											
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (Mini-DisplayPort or HDMI) @60Hz											
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions ³	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm											
Weight ²	3-cell: from 4.08 lb (1.85kg)											
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic											
Battery - type	Integrated Li-Polymer 3-cell											
Battery - life ¹⁰	3-cell (47Whr): up to 7.1 hr											
Chipset	Mobile Intel UM77 Express Chipset											
ExpressCard	None											
Smart Card read	None											
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)											
PCIe Mini Card	Two PCI Express Mini Card slots											
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter											
PCIe WWAN	None											
Carrier	None											
Modem	None											
IEEE 1394	None											
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter											
Ethernet	Realtek® RTL8111F Gigabit Network Connection											
Intel AMT	None											
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack											
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	Trusted Platform Module, TCG 1.2-compliant											
Fingerprint reader	AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip											
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available											

See footnotes for more detailed information

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ThinkPad T430u 8614 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
8614-8BU	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3	Win7 Pro64	10/12
8614-6WU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	Intel 2230	None	Finger	BT	3	Win8 Pro64	10/12
8614-6VU	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	Intel 2230	24GB mSATA	Finger	BT	3	Win8 Pro64	10/12
8614-ANU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	Intel 2230	None	Finger	BT	3	Win7 Pro64	02/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	Some: mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; <i>Maximum external resolution: 2560x1600 (Mini-DisplayPort or HDMI) @60Hz</i>		
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³		
Touchpad ThinkLight™	UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight ²	3-cell: from 4.08 lb (1.85kg)		
Case material	Display cover: Aluminum; Bottom: Glass-Fiber Reinforced Plastic		
Battery - type	Integrated Li-Polymer 3-cell		
Battery - life ¹⁰	3-cell (47Whr): up to 7.1 hr		
Chipset	Mobile Intel UM77 Express Chipset		
ExpressCard	None		
Smart Card read	None		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + Bluetooth combo adapter		
PCIe WWAN	None		
Carrier	None		
Modem	None		
IEEE 1394	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
65-watt AC adapter ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-T430-U sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad T430u 8614 (Optimus) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
8614-8CU	i7-3517U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	Win7 Pro64	10/12
8614-6YU	i7-3517U	4GBx1	14.0" HD	720p	128G SSD	Intel 2230	None	Finger	BT	3	Win8 Pro64	10/12
8614-6XU	i7-3517U	4GBx1	14.0" HD	720p	500G 7200	Intel 2230	24GB mSATA	Finger	BT	3	Win8 Pro64	10/12
8614-ARU	i7-3537U	4GBx1	14.0" HD	720p	500G 7200	Intel 2230	24GB mSATA	Finger	BT	3	Win7 Pro64	02/13
8614-AQU	i7-3537U	4GBx1	14.0" HD	720p	500G 7200	Intel 2230	24GB mSATA	Finger	BT	3	Win8 Pro64	02/13
8614-APU	i7-3537U	4GBx1	14.0" HD	720p	128G SSD	Intel 2230	None	Finger	BT	3	Win8 Pro64	02/13
8614-8WU	i7-3537U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	Win7 Pro64	02/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i7-3517U processor (2 cores, 1.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i7-3537U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.1GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	Some: mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA GeForce® GT 620M , PCI Express® x16, 1GB memory, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; <i>Maximum external resolution: 2560x1600 (Mini-DisplayPort or HDMI) @60Hz</i>		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm 3-cell: from 4.12 lb (1.87kg) <i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Integrated Li-Polymer 3-cell 3-cell (47Whr): up to 6.6 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel UM77 Express Chipset None None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + Bluetooth combo adapter		
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	None None None None Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Realtek® RTL8111F Gigabit Network Connection None HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		
			Supports ThinkVantage® technologies
			65-watt AC adapter ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
			For compatible accessories, please go to O-T430-U sheet;
			For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) withdrawn effective March 5, 2013

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery (G) cells	Global (P) GMP	Preload	Ann Date (mm/yy)
3352-2SU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	G	Pro 64	08/12
3352-2NU	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3		Pro 64	08/12

• A depot repair service 3-year limited warranty

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology							Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64					
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager					
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™							Preloaded applications ¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials					
mSATA™ SSD	<i>Some:</i> mSATA Solid State Drive (SSD), via PCIe Mini Card slot												
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (Mini-DisplayPort or HDMI) @60Hz												
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys												
Touchpad ThinkLight™	TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm												
Weight ²	3-cell: from 4.08 lb (1.85kg)												
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic												
Battery - type	Integrated Li-Polymer 3-cell												
Battery - life ¹⁰	3-cell (47Whr): up to 7.1 hr												
Chipset	Mobile Intel UM77 Express Chipset												
ExpressCard	None												
Smart Card read	None												
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)												
PCIe Mini Card	Two PCI Express Mini Card slots												
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter												
PCIe WWAN	None												
Carrier	None												
Modem	None												
IEEE 1394	None												
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Ethernet	Realtek® RTL8111F Gigabit Network Connection												
Intel AMT	None												
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available												

See footnotes for more detailed information

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ThinkPad T430u 3352 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ^a rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
3352-3CU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	Intel 2230	None	Finger	BT	3	G	Win8 Pro64	10/12
3352-33U	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	Intel 2230	24GB mSATA	Finger	BT	3		Win8 Pro64	10/12
3352-3TU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3		Win7 Pro64	12/12
3352-3SU	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3		Win7 Pro64	12/12
3352-4ZU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	None	BT	3		Win7 Pro64	06/13
3352-4YU	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	None	BT	3		Win7 Pro64	06/13

• A depot repair service 3-year limited warranty

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	Some: mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; <i>Maximum external resolution: 2560x1600 (Mini-DisplayPort or HDMI) @60Hz</i>		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight ²	3-cell: from 4.08 lb (1.85kg)		
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type	Integrated Li-Polymer 3-cell		
Battery - life ¹⁰	3-cell (47Whr): up to 7.1 hr		
Chipset	Mobile Intel UM77 Express Chipset		
ExpressCard	None		
Smart Card read	None		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + Bluetooth combo adapter		
PCIe WWAN	None		
Carrier	None		
Modem	None		
IEEE 1394	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	Some: AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
65-watt AC adapter ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For compatible accessories, please go to O-T430-U sheet; For Lenovo service²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

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ThinkPad T430u 6273 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Blue-tooth	Bat- tery cells	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
6273-2SU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	G P	Pro 64	08/12

• Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; <i>Maximum external resolution: 2560x1600 (Mini-DisplayPort or HDMI) @60Hz</i>		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight ²	3-cell: from 4.08 lb (1.85kg)		
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type	Integrated Li-Polymer 3-cell		
Battery - life ¹⁰	3-cell (47Whr): up to 7.1 hr		
Chipset	Mobile Intel UM77 Express Chipset		
ExpressCard	None		
Smart Card read	None		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter		
PCIe WWAN	None		
Carrier	None		
Modem	None		
IEEE 1394	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

See footnotes for more detailed information

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ThinkPad T430u 6273 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
6273-23U	i5-3427U	4+2GB	14.0" HD	720p	500G 7200	TP 11a/b/g/n	None	Finger	BT	3	G P	Win8 Pro64	10/12
6273-24U	i5-3427U	8GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	None	Finger	BT	3	G P	Win8 Pro64	10/12
6273-25U	i5-3427U	8GBx1	14.0" HD	720p	1T 5400	TP 11a/b/g/n	None	Finger	BT	3	G P	Win8 Pro64	10/12
6273-26U	i5-3427U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	None	Finger	BT	3	G P	Win8 Pro64	10/12
6273-3CU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	Intel 2230	None	Finger	BT	3	G P	Win8 Pro64	10/12
6273-3DU	i5-3337U	2GBx1	14.0" HD	720p	128G SSD	WLAN upg	None	Finger	No	3	G P	Win8 Pro64	03/13

• Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Mainstream Ultrabook™; one spindle Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	8GB max ⁷ (up to 16GB max for certain special configuration models only) / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (Mini-DisplayPort or HDMI) @60Hz		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.0W" (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight ²	3-cell: from 4.08 lb (1.85kg)		
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type	Integrated Li-Polymer 3-cell		
Battery - life ¹⁰	3-cell (47Whr): up to 7.1 hr		
Chipset	Mobile Intel UM77 Express Chipset		
ExpressCard	None		
Smart Card read	None		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	<i>Some:</i> Wireless LAN upgradable <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + Bluetooth combo adapter		
PCIe WWAN	None		
Carrier	None		
Modem	None		
IEEE 1394	None		
Bluetooth™	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		
			Supports ThinkVantage® technologies
			65-watt AC adapter ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
			For compatible accessories, please go to O-T430-U sheet;
			For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad T430u Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann	06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann	06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann	06/05/12

Storage and removable storage

USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Lenovo® Slim USB Portable DVD Burner	0A33988	ann	06/14/11

ThinkPad Expansion

Lenovo Essential Notebook Stand	45J9292	ann	05/12/09
USB 2.0 Port Replicator with Digital Video	0A33942	ann	03/22/11
ThinkPad USB 3.0 Dock	0A33970	ann	05/15/12

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann	01/07/10
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10

Power Adapters

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:

ThinkPad Ultralight Backpack	0B47306	ann	12/11/12
ThinkPad Ultralight Topload	0B47307	ann	12/11/12
14W Ultrabook Topload & Standard Sleeve Set - Black	0B95750	ann	08/07/12
14W Ultrabook Topload & Standard Sleeve Set - Brown	0B95751	ann	08/07/12

Up to 15.6" widescreen models:

ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann	08/16/11

More information at www.lenovo.com/support/monitors

www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann	08/14/12
Lenovo HDMI to HDMI Monitor Cable	0B47070	ann	05/22/12
Lenovo HDMI to VGA Monitor Cable	0B47069	ann	06/26/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann	05/17/11
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann	07/24/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s with
ThinkPad Mini Dock Series 3 with USB 3.0 - 90W
433715U

ThinkPad T431s 20AA (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	Finger-print reader	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
20AA000SUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235 ²⁸	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000TUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000KUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000JUS	i5-3337U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	None	No	Win7 Pro64	03/13
20AA000UUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000GUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	None	No	Win8 Pro64	03/13
20AA000PUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000QUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000VUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000LUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000BUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	None	No	Win7 Pro64	03/13
20AA000MUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000RUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000HUS	i5-3337U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	None	No	Win8 Pro64	03/13
20AA000XUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	None	Intel 6235	24GB SSD	Finger	3	None	No	Win7 Pro64	03/13
20AA000NUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	None	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win7 Pro64	04/13
20AA0032US	i7-3687U	4+4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	07/13
20AA002WUS	i7-3687U	4+4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	None	3	iAMT	vPro	Win7 Pro64	07/13
20AA0030US	i5-3437U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	07/13
20AA002YUS	i5-3337U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	None	3	None	No	Win7 Pro64	07/13
20AA0031US	i5-3437U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	None	3	iAMT	vPro	Win7 Pro64	07/13
20AA0034US	i5-3337U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	Finger	3	None	No	Win7 Pro64	07/13
20AA001WUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	3	None	No	Win7 Pro64	07/13
Positioning Processor	Thin and light enterprise-class Ultrabook™; one spindle Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology									Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket									Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™ • Amazon Kindle • Nitro Pro • PC Device Stage • Evernote				
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot													
Widescreen display	14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio													
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)													
Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch None													
Dimensions ³ Weight ² Case color Case material	14.0W" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm 3-cell: from 3.6 lb (1.63kg) Graphite Black <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Base:</i> Magnesium alloy Integrated Li-Polymer 3-cell (47Whr), HW Authentication <i>MobileMark® 2007:</i> Windows 7: up to 9.0 hr <i>MobileMark 2012:</i> Windows 7: up to 5.9 hr; Windows 8: up to 6.4 hr													
Battery - type Battery - life ¹⁰														
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM77 Express Chipset None None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), Dock connector													
PCIe WLAN ⁴ PCIe WWAN Carrier Bluetooth™ Ethernet Intel AMT Audio support	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter Some: Wireless WAN upgradable None Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Some: Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Security Security chip Fingerprint reader														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available									Supports ThinkVantage® technologies 45-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For Lenovo service ²² upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

ThinkPad T431s 20AC

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	Carrier	Finger-print reader	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
20AC000PUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235 ²⁸	WWAN upg	None	None	3	vPro	Win7 Pro64	03/13
20AC000FUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000MUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000EUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC0006US	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	None	3	vPro	Win8 Pro64	03/13
20AC0005US	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win8 Pro64	03/13
20AC000BUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000DUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000CUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000HUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000KUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000RUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win7 Pro64	03/13

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Thin and light enterprise-class Ultrabook™; one spindle</i> Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™ • Amazon Kindle • Nitro Pro • PC Device Stage • Evernote
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™		
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot		
Widescreen display	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight		
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm		
Weight ²	3-cell: from 3.6 lb (1.63kg)		
Case color	Graphite Black		
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Base:</i> Magnesium alloy		
Battery - type	Integrated Li-Polymer 3-cell (<i>47Whr</i>), HW Authentication		
Battery - life ¹⁰	<i>MobileMark® 2007:</i> Windows 7: up to 9.0 hr <i>MobileMark 2012:</i> Windows 7: up to 5.9 hr; Windows 8: up to 6.4 hr		
Chipset	Mobile Intel QM77 Express Chipset		
ExpressCard	None		
Smart Card read	None		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), Dock connector		
PCIe WLAN ⁴	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter		
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable		
Carrier	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	<i>Some:</i> AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
45-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For Lenovo service²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

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(ST1-2) June 2013

ThinkPad T431s 20AC (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	Carrier	Finger-print reader	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
20AC0014US	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235 ²⁸	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC0018US	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000XUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	None	3	vPro	Win7 Pro64	03/13
20AC0016US	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win7 Pro64	03/13
20AC0010US	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000WUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	None	3	vPro	Win8 Pro64	03/13
20AC0012US	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win8 64	03/13
20AC001AUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC001CUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000TUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win8 Pro64	03/13
20AC000VUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win8 Pro64	03/13
20AC0013US	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 64	03/13
20AC001EUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC0019US	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
Positioning Processor	Thin and light enterprise-class Ultrabook™; one spindle Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology									Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit				
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket									Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™ • Amazon Kindle • Nitro Pro • PC Device Stage • Evernote				
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot													
Widescreen display	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio													
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)													
Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch None													
Dimensions ³	14.0W" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm													
Weight ²	3-cell: from 3.6 lb (1.63kg)													
Case color	Graphite Black													
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Base:</i> Magnesium alloy													
Battery - type	Integrated Li-Polymer 3-cell (<i>47Whr</i>), HW Authentication													
Battery - life ¹⁰	<i>MobileMark® 2007:</i> Windows 7: up to 9.0 hr <i>MobileMark 2012:</i> Windows 7: up to 5.9 hr; Windows 8: up to 6.4 hr													
Chipset	Mobile Intel QM77 Express Chipset													
ExpressCard	None													
Smart Card read	None													
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
Ports	Two USB 3.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), Dock connector													
PCIe WLAN ⁴	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter													
PCIe WWAN	Some: Wireless WAN upgradable													
Carrier	None													
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Ethernet	Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1													
Intel AMT	Intel Active Management Technology (iAMT)													
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Fingerprint reader	Some: AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available									For Lenovo service ²² upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

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(ST1-3) June 2013



Lenovo® ThinkPad T440



Lenovo ThinkPad T440



Lenovo ThinkPad T440



Lenovo ThinkPad T440



Lenovo ThinkPad T440

ThinkPad T440 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mainstream Ultrabook™ or Thinbook; one spindle									Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack																
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor									WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none">ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 CardIntel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 CardIntel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 CardIntel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card																
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology	WWAN (optional)	One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none">Wireless WAN upgradableWireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card																
	i3-4010U	2	4	1.7 GHz	-	3MB	DDR3L-1600	Intel HD graphics 4400	No																		
	i5-4200U			1.6 GHz	2.6 GHz	3MB			No																		
	i5-4300U			1.9 GHz	2.9 GHz	3MB			Yes																		
	i7-4500U			1.8 GHz	3 GHz	4MB			No																		
	i7-4600U			2.1 GHz	3.3 GHz	4MB			Yes																		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)									SIM card (optional)	One of the following, configurable by model: <ul style="list-style-type: none">AT&T® or Verizon® LTE (4G), contract required with service providerUser selectable, contract required with service provider																
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™									Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication																
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card									NFC																	
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio									Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models																
MultiTouch Camera	Some: Capacitive-type MultiTouch, supports ten-finger gesture HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus									Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor																
Graphics	Intel HD Graphics 4400 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)									Limited warranty ¹²	One of the following, configurable by model: <ul style="list-style-type: none">1-year - depot repair service / service upgrades²² available3-years/1-yr battery - depot repair service / service upgrades available3-years/1-yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available For Lenovo service upgrade options, please go to S-TA sheet																
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch									Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">Lenovo Solution CenterThinkVantage Product RecoveryRescue and Recovery™ThinkVantage System UpdateLenovo Cloud Storage by SugarSyncPC Device StageAdobe® Reader®Nitro ProEvernote®Skype™Microsoft® Office preloaded; purchase a product key to activateNorton™ Internet Security (30 days of virus definitions) Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">Lenovo Solution CenterLenovo SupportLenovo CompanionThinkVantage System UpdateLenovo Reach (Window 8.1 model)Hightail - Metro (Window 8.1 model)Lenovo Cloud Storage by SugarSync - Metro (Window 8 model)Lenovo Cloud Storage by SugarSync (Window 8 model)PC Device StageAccuWeatherAmazon KindleNitro ProEvernoteSkypeRara StreamingNorton StudioMicrosoft Office preloaded; purchase a product key to activateNorton Internet Security (30 days of virus definitions)																
ThinkLight™	None																										
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm																										
Weight ²	<table><tr><td>Models</td><td colspan="2">3-cell + 3-cell</td><td colspan="2">3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td colspan="2">4.0 lb / 1.81kg</td><td colspan="2">4.4 lb / 2.0kg</td></tr><tr><td>MultiTouch</td><td colspan="2">4.3 lb / 1.95kg</td><td colspan="2">4.7 lb / 2.13kg</td></tr></table>									Models	3-cell + 3-cell		3-cell + 6-cell		Non-MultiTouch	4.0 lb / 1.81kg		4.4 lb / 2.0kg		MultiTouch	4.3 lb / 1.95kg		4.7 lb / 2.13kg				
Models	3-cell + 3-cell		3-cell + 6-cell																								
Non-MultiTouch	4.0 lb / 1.81kg		4.4 lb / 2.0kg																								
MultiTouch	4.3 lb / 1.95kg		4.7 lb / 2.13kg																								
Case material	Glass-Fiber Reinforced Plastic																										
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication																										
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication																										
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td colspan="2">3-cell + 3-cell</td><td colspan="2">3-cell + 6-cell 47.5Wh</td><td colspan="2">3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td colspan="2">8.6 hr</td><td colspan="2">12.9 hr</td><td colspan="2">17.2 hr</td></tr></table>									Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh		Battery life	8.6 hr		12.9 hr		17.2 hr					
Battery configuration	3-cell + 3-cell		3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh																						
Battery life	8.6 hr		12.9 hr		17.2 hr																						
AC adapter	45-watt AC adapter																										
Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)																										
Smart Card Read	Optional: Smart Card reader, exclusive with M.2 SSD																										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																										
Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector																										
										Environment	EPEAT™ Gold; ENERGY STAR® 5.0; GREENGUARD®; RoHS-compliant																

See footnotes for more detailed information

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(CB1-Spec) February 2014

ThinkPad T440 20B6 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B6001YUS	i5-4200U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	No+6 ¹	Win7 P64	1-Depot	No	09/13
20B60020US	i5-4200U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	16GB	3+3	Win7 P64	1-Depot	No	09/13
20B60021US	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	16GB	3+3	Win7 P64	1-Depot	No	09/13
20B60022US	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	No+6 ¹	Win7 P64	1-Depot	No	09/13
20B60057US	i5-4200U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	16GB	3+3	Win7 P64 DG Win8	1-Depot	No	09/13
20B60058US	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	None	None	16GB	3+3	Win7 P64 DG Win8	1-Depot	No	09/13
20B6005FUS	i5-4200U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	No+6 ¹	Win7 P64 DG Win8	1-Depot	No	09/13
20B6005GUS	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	No+6 ¹	Win7 P64 DG Win8	1-Depot	No	09/13
20B6005RUS	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	1-Depot	No	09/13
20B6006CUS	i5-4200U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	1-Depot	No	11/13
20B6008EUS	i5-4200U	4+0GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	1-Depot	No	03/14
20B6008CUS	i5-4200U	4+0GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8.1	3-Depot	No	03/14
20B6008DUS	i7-4600U	4+0GB	14" HD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	03/14
20B6008FUS	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	03/14
20B6008GUS	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	03/14
20B6008HUS	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200 OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	03/14
20B6008JUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)														
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read	<i>Optional:</i> Smart Card reader														
				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector														
Optical	None			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack														
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card														
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader <i>Some:</i> Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 350:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider														
MultiTouch	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville) <i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville) <i>Optional:</i> Near Field Communication														
Graphics	Intel HD Graphics 4400 in processor			NFC															
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Security	Power-on password, hard disk password, supervisor password, security keyhole														
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security chip	Trusted Platform Module, TCG 1.2-compliant														
ThinkLight™	None			vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models														
Dimensions ³	<i>14.0W" (WxDxH):</i> 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm <i>14.0W" MultiTouch (WxDxH):</i> 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor														
Weight ²	<table><tr><td><i>Models</i></td><td><i>3-cell + 3-cell</i></td><td colspan="2"><i>3-cell + 6-cell</i></td></tr><tr><td><i>Non-MultiTouch</i></td><td>4.0 lb / 1.81kg</td><td colspan="2">4.4 lb / 2.0kg</td></tr><tr><td><i>MultiTouch</i></td><td>4.3 lb / 1.95kg</td><td colspan="2">4.7 lb / 2.13kg</td></tr></table>			<i>Models</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell</i>		<i>Non-MultiTouch</i>	4.0 lb / 1.81kg	4.4 lb / 2.0kg		<i>MultiTouch</i>	4.3 lb / 1.95kg	4.7 lb / 2.13kg		Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit		
<i>Models</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell</i>																	
<i>Non-MultiTouch</i>	4.0 lb / 1.81kg	4.4 lb / 2.0kg																	
<i>MultiTouch</i>	4.3 lb / 1.95kg	4.7 lb / 2.13kg																	
Case material	Glass-Fiber Reinforced Plastic			Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite															
Internal battery	<i>Optional:</i> Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication																		
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication																		
Battery - life ¹⁰	<table><tr><td><i>Battery configuration</i></td><td><i>3-cell + 3-cell</i></td><td><i>3-cell + 6-cell 47.5Wh</i></td><td><i>3-cell + 6-cell 72Wh</i></td></tr><tr><td><i>Battery life</i></td><td>8.6 hr</td><td>12.9 hr</td><td>17.2 hr</td></tr></table>							<i>Battery configuration</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell 47.5Wh</i>	<i>3-cell + 6-cell 72Wh</i>	<i>Battery life</i>	8.6 hr	12.9 hr	17.2 hr				
<i>Battery configuration</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell 47.5Wh</i>	<i>3-cell + 6-cell 72Wh</i>																
<i>Battery life</i>	8.6 hr	12.9 hr	17.2 hr																
AC adapter	45-watt AC adapter																		

See footnotes for more detailed information

US model(s) withdrawn effective October 2013

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ThinkPad T440 20B6 (TopSeller) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B60059US	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	None	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005AUS	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005BUS	i5-4300U	0+4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005CUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005DUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005EUS	i7-4600U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005KUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005LUS	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005MUS	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	None	None	None	No+6 ¹	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005PUS	i7-4600U	4+0GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	09/13
20B6005HUS	i5-4300U	0+4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	10/13
20B6005JUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	10/13
20B6005NUS	i7-4600U	4+0GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	10/13
20B6006AUS	i5-4300U	0+4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win7 P64 DG Win8	3-Depot	No	11/13
20B6006BUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20B6006DUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20B6006EUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read	Optional: Smart Card reader
				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector
Optical	None			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high				
	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader				7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card
	Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card
					7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable
MultiTouch	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio				EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Camera	Some: Capacitive-type MultiTouch, supports ten-finger gesture				
	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider
Graphics	Intel HD Graphics 4400 in processor			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville)
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				vPro model: Intel Ethernet Connection I218-LM (Clarkville)
ThinkLight™	None			NFC	Optional: Near Field Communication
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			Security	Power-on password, hard disk password, supervisor password, security keyhole
	14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Security chip	Trusted Platform Module, TCG 1.2-compliant
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
	Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor
	MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg	Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit
Case material	Glass-Fiber Reinforced Plastic				Win8 / 8.1 64: Windows 8 / 8.1 64-bit
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication				Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication				
Battery - life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh		
	Battery life	8.6 hr	12.9 hr		
AC adapter	45-watt AC adapter				
				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite

See footnotes for more detailed information

ThinkPad T440 20B6 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B6002AUS	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	No	09/13
20B6002BUS	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	09/13
20B6002CUS	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	09/13
20B6002DUS	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	No	09/13
20B60077US	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	No	01/14
20B60078US	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Depot	No	01/14
20B60079US	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	No	01/14
20B6007AUS	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	No	01/14
20B6007BUS	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Depot	No	01/14
20B60076US	i5-4200U	0+4GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	None	None	None	3+3	Win8.1 P64	1-Depot	No	01/14
20B6008KUS	i5-4300U	4+0GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Depot	No	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read	<i>Optional:</i> Smart Card reader		
				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector		
Optical	None			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high						
	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card		
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader				<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card		
	<i>Some:</i> Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				<i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card		
					<i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 350:1 contrast ratio			WWAN	<i>upg:</i> Wireless WAN upgradable		
MultiTouch	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio			<i>(optional)</i>	<i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
Camera	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture						
	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider		
Graphics	Intel HD Graphics 4400 in processor			<i>(optional)</i>	User selectable, contract required with service provider		
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville)		
ThinkLight™	None				<i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville)		
				NFC	<i>Optional:</i> Near Field Communication		
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			Security	Power-on password, hard disk password, supervisor password, security keyhole		
	14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Security chip	Trusted Platform Module, TCG 1.2-compliant		
Weight ²				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models		
				Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor		
				Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit		
Case material	Glass-Fiber Reinforced Plastic				<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit		
Internal battery	<i>Optional:</i> Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication				<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit		
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						
Battery - life ¹⁰				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		

See footnotes for more detailed information

ThinkPad T440 20B7

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B70044US	i5-4300U	0+4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B70047US	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004CUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004FUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004HUS	i5-4300U	0+4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004JUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004MUS	i5-4300U	0+8GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004BUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004DUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004GUS	i7-4600U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7004QUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20B7008UUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20B7008WUS	i5-4300U	4+0GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 a/b/g/n	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20B7008YUS	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20B7008VUS	i7-4600U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20B7008XUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)										
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector										
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack										
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card										
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS										
MultiTouch Camera	Some: Capacitive-type MultiTouch, supports ten-finger gesture HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider										
Graphics	Intel HD Graphics 4400 in processor			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication										
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models										
ThinkLight™	None			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor										
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit										
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>4.0 lb / 1.81kg</td><td>4.4 lb / 2.0kg</td></tr><tr><td>MultiTouch</td><td>4.3 lb / 1.95kg</td><td>4.7 lb / 2.13kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg	MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
Models	3-cell + 3-cell	3-cell + 6-cell													
Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg													
MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg													
Case material	Glass-Fiber Reinforced Plastic														
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication														
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication														
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.6 hr</td><td>12.9 hr</td><td>17.2 hr</td></tr></table>			Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.6 hr	12.9 hr	17.2 hr				
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh												
Battery life	8.6 hr	12.9 hr	17.2 hr												
AC adapter	45-watt AC adapter														

See footnotes for more detailed information

ThinkPad T440 20B7 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B70005US	i5-4300U	0+4GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win8 P64	3-Depot	Yes	09/13
20B70006US	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	09/13
20B70008US	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B70009US	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000BUS	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000FUS	i5-4300U	0+4GB	14" HD+		HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000GUS	i7-4600U	4+0GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000JUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000NUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000QUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win8 P64	3-Depot	Yes	09/13
20B7000RUS	i7-4600U	4+0GB	14" HD+		HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000TUS	i5-4300U	0+4GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000UUS	i5-4300U	0+4GB	14" HD+		HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000VUS	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B7000WUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	09/13
20B7003SUS	i5-4300U	0+8GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	No	09/13
20B7003UUS	i5-4300U	0+8GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win8 P64	3-Depot	No	09/13
20B7003VUS	i5-4300U	0+8GB	14" HD+		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	09/13
20B7005KUS	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	01/14
20B7005MUS	i5-4300U	0+4GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Depot	Yes	01/14
20B7005LUS	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	01/14
20B7005NUS	i7-4600U	4+0GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Depot	Yes	01/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)									
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read	Optional: Smart Card reader									
				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									
				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector									
Optical	None			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider									
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication									
Graphics	Intel HD Graphics 4400 in processor			NFC										
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Security	Power-on password, hard disk password, supervisor password, security keyhole									
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security chip	Trusted Platform Module, TCG 1.2-compliant									
ThinkLight™	None			vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models									
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor									
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>4.0 lb / 1.81kg</td><td>4.4 lb / 2.0kg</td></tr><tr><td>MultiTouch</td><td>4.3 lb / 1.95kg</td><td>4.7 lb / 2.13kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg	MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg	Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit
Models	3-cell + 3-cell	3-cell + 6-cell												
Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg												
MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg												
Case material	Glass-Fiber Reinforced Plastic			Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite										
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication													
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication													
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.6 hr</td><td>12.9 hr</td><td>17.2 hr</td></tr></table>					Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.6 hr	12.9 hr	17.2 hr	
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh											
Battery life	8.6 hr	12.9 hr	17.2 hr											
AC adapter	45-watt AC adapter													

See footnotes for more detailed information

ThinkPad T440 20B7 (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B70061US	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	03/14
20B70062US	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	03/14
20B70065US	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	03/14
20B70066US	i5-4300U	4+0GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	03/14
20B70068US	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	03/14
20B70069US	i5-4300U	4+0GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	03/14

6'=6-cell 47.5Wh; 6'=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read	Optional: Smart Card reader
				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector
Optical	None			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high				
	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader				7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card
	Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card
					7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable
MultiTouch	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio				EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Camera	Some: Capacitive-type MultiTouch, supports ten-finger gesture				
	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider
Graphics	Intel HD Graphics 4400 in processor			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville)
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				vPro model: Intel Ethernet Connection I218-LM (Clarkville)
ThinkLight™	None			NFC	Optional: Near Field Communication
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			Security	Power-on password, hard disk password, supervisor password, security keyhole
	14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Security chip	Trusted Platform Module, TCG 1.2-compliant
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
	Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor
	MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg	Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit
Case material	Glass-Fiber Reinforced Plastic				Win8 / 8.1 64: Windows 8 / 8.1 64-bit
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication				Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication				
Battery - life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh		
	Battery life	8.6 hr	12.9 hr		
AC adapter	45-watt AC adapter			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite

See footnotes for more detailed information

ThinkPad T440 20B7 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B70048US	i5-4300U	0+4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B70049US	i5-4300U	0+4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B7004EUS	i5-4300U	0+8GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B7004LUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B7004NUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B7004PUS	i5-4300U	0+4GB	14" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B7004RUS	i5-4300U	0+8GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B70045US	i7-4600U	4+0GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B70046US	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B7004AUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20B7004KUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Onsite	Yes	11/13

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)									
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector									
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
Widescreen display	Some: 14.0" (355mm) HD (1366x768), 200 nits, 350:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
MultiTouch Camera	Some: Capacitive-type MultiTouch, supports ten-finger gesture HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider									
Graphics	Intel HD Graphics 4400 in processor			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication									
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models									
ThinkLight™	None			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor									
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm 14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit									
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>4.0 lb / 1.81kg</td><td>4.4 lb / 2.0kg</td></tr><tr><td>MultiTouch</td><td>4.3 lb / 1.95kg</td><td>4.7 lb / 2.13kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg	MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg		
Models	3-cell + 3-cell	3-cell + 6-cell												
Non-MultiTouch	4.0 lb / 1.81kg	4.4 lb / 2.0kg												
MultiTouch	4.3 lb / 1.95kg	4.7 lb / 2.13kg												
Case material	Glass-Fiber Reinforced Plastic													
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication													
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication													
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.6 hr</td><td>12.9 hr</td><td>17.2 hr</td></tr></table>			Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.6 hr	12.9 hr	17.2 hr			
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh											
Battery life	8.6 hr	12.9 hr	17.2 hr											
AC adapter	45-watt AC adapter			Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite										

See footnotes for more detailed information

ThinkPad T440 20B7 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory (soldered +DIMM)	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20B70007US	i5-4300U	0+4GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite	Yes	09/13
20B7000CUS	i7-4600U	4+0GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite	Yes	09/13
20B7000DUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite	Yes	09/13
20B7000HUS	i5-4300U	0+4GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win8 P64	3-Onsite	Yes	09/13
20B7000LUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	09/13
20B7000MUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ¹	Win8 P64	3-Onsite	Yes	09/13
20B7000PUS	i5-4300U	0+4GB	14" HD+		HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	09/13
20B7000SUS	i5-4300U	0+4GB	14" HD		HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	09/13
20B7000XUS	i5-4300U	0+4GB	14" HD+		HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	09/13
20B7003TUS	i5-4300U	0+8GB	14" HD+		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite	No	09/13
20B7003WUS	i5-4300U	0+8GB	14" HD+		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	09/13
20B70063US	i5-4300U	4+0GB	14" HD+	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20B70064US	i5-4300U	4+0GB	14" HD+	MT	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20B70067US	i5-4300U	4+0GB	14" HD+	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20B7006AUS	i5-4300U	4+0GB	14" HD+	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Onsite	Yes	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)		
Memory	8GB or 12GB* max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable*, 4GB memory soldered to systemboard on selected models, one 204-pin SO-DIMM socket (*for the models with 4GB on-board memory)			Smart Card Read	<i>Optional:</i> Smart Card reader		
				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector		
Optical	None			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high						
	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card		
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader				<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card		
	<i>Some:</i> Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				<i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card		
					<i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 350:1 contrast ratio			WWAN	<i>upg:</i> Wireless WAN upgradable		
MultiTouch	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio			<i>(optional)</i>	<i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
Camera	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture						
	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider		
Graphics	Intel HD Graphics 4400 in processor			<i>(optional)</i>	User selectable, contract required with service provider		
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville)		
ThinkLight™	None				<i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville)		
				NFC	<i>Optional:</i> Near Field Communication		
Dimensions ³	14.0W" (WxDxH): 13.35" x 9.15" x 0.83"; 339mm x 232.5mm x 21mm			Security	Power-on password, hard disk password, supervisor password, security keyhole		
	14.0W" MultiTouch (WxDxH): 13.35" x 9.15" x 0.91"; 339mm x 232.5mm x 23mm			Security chip	Trusted Platform Module, TCG 1.2-compliant		
Weight ²				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models		
				Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor		
				Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit		
Case material	Glass-Fiber Reinforced Plastic				<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit		
Internal battery	<i>Optional:</i> Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication				<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit		
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						
Battery - life ¹⁰							

See footnotes for more detailed information



Lenovo® ThinkPad T440p



Lenovo ThinkPad T440p



Lenovo ThinkPad T440p



Lenovo ThinkPad T440p



Lenovo ThinkPad T440p

ThinkPad T440p Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mainstream performance; two spindles									Chipset	Mobile Intel QM87 Express Chipset		
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor									Smart Card Read	Optional: Smart Card reader		
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
	i3-4000M	2	4	2.4 GHz	-	3MB	DDR3L-1600	Intel HD Graphics 4600	No	Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector		
	i5-4200M			No	WLAN ⁴	One of the following, configurable by model:							
	i5-4300M			Yes		• ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 Card							
	i5-4330M			Yes		• Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card							
	i7-4600M	4	8	2.8 GHz		3.5 GHz	3MB	Yes	WWAN (optional)	One of the following, configurable by model (mutually exclusive with M.2 SSD):			
	i7-4700MQ			2.9 GHz	3.6 GHz	4MB	Yes	• Wireless WAN upgradable					
	i7-4800MQ			2.4 GHz	3.4 GHz	6MB	No	• Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card					
i7-4900MQ	2.7 GHz			3.7 GHz	6MB	Yes							
			2.8 GHz	3.8 GHz	8MB			Yes					
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									SIM card (optional)	One of the following, configurable by model:		
Optical Ultrabay	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access										• AT&T® or Verizon® LTE (4G), contract required with service provider		
SATA disk	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™									Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
M.2 SSD	All: removable, upgradable, supports the second disk, Shock Mounted Some: M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card									Ethernet	Intel Ethernet Connection I217-LM (Clarkville)		
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080) color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS									NFC	Optional: Near Field Communication		
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus									Security	Power-on password, hard disk password, supervisor password, security keyhole		
Graphics	Intel HD Graphics 4600 in processor only, or Intel HD Graphics 4600 in processor and NVIDIA GeForce® GT 730M, PCI Express® x8, 1GB memory, NVIDIA® Optimus™ technology; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 1920x1200@60Hz (VGA); 3840x2160@60Hz (DP via mDP cable)									Security chip	Trusted Platform Module, TCG 1.2-compliant		
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch									vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models		
ThinkLight™	None									Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor		
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm									Limited warranty ¹² One of the following, configurable by model:			
Weight ²	Models	6-cell			9-cell					• 1-year - depot repair service / service upgrades ²² available			
	Integrated	4.70 lb / 2.14kg			4.92 lb / 2.23kg					• 3-years/1-yr battery - depot repair service / service upgrades available			
	Optimus	4.77 lb / 2.16kg			5.10 lb / 2.31kg					• 3-years/1-yr battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic									For Lenovo service upgrade options, please go to S-TA sheet			
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication									Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit		
Battery - life ¹⁰	Models	6-cell			9-cell					Some: Windows 8 / 8.1 Pro 64-bit			
	Integrated	7.4 hr			13.2 hr					• Lenovo Solution Center			
	Optimus	7.2 hr			12.7 hr					• Lenovo Support			
AC adapter	Models	dual-core			quad-core					• Lenovo Companion			
	Integrated	65-watt			90-watt					• ThinkVantage Product Recovery			
	Optimus	90-watt			135-watt					• Rescue and Recovery™			
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											• ThinkVantage System Update	
												• Lenovo Cloud Storage by SugarSync	
												• PC Device Stage	
												• Adobe® Reader®	
												• Nitro Pro	
												• Evernote®	
												• Skype™	
												• Microsoft® Office preloaded; purchase a product key to activate	
												• Norton™ Internet Security (30 days of virus definitions)	
												• Cyberlink PowerDVD (DVD±RW)	
												• Cyberlink Power2Go (DVD±RW)	
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												• Cyberlink PowerProducer (DVD±RW)	
												• Cyberlink PowerProducer (DVD±RW)	
												• Cyberlink PowerProducer (DVD±RW)	
												• Cyberlink PowerProducer (DVD±RW)	
												• Cyberlink PowerProducer (DVD±RW)	

See footnotes for more detailed information

ThinkPad T440p 20AN (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AN0069US	i5-4200M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	6	65W	Win7 P64 DG Win8	1-Depot	No	10/13
20AN006AUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	1-Depot	No	10/13
20AN006BUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	6	65W	Win7 P64 DG Win8	1-Depot	No	10/13
20AN000GUS	i5-4200M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	6	65W	Win7 P64	1-Depot	No	10/13
20AN000HUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	6	65W	Win7 P64	1-Depot	No	10/13
20AN000JUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	Finger	None	None	6	65W	Win7 P64	1-Depot	No	10/13
20AN006CUS	i5-4300M	4GBx1	14" FHD	HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006DUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006EUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006FUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006GUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006HUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006JUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	None	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006KUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN000KUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64	3-Depot	No	10/13
20AN000LUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64	3-Depot	No	10/13
20AN000MUS	i5-4300M	4GBx1	14" FHD	HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64	3-Depot	No	10/13
20AN000NUS	i5-4200M	4GBx1	14" HD+	HD 4600	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64	3-Depot	No	10/13
20AN000PUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64	3-Depot	No	10/13
20AN000QUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64	3-Depot	No	10/13
20AN000RUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	None	None	None	6	65W	Win7 P64	3-Depot	No	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor		Chipset	Mobile Intel QM87 Express Chipset	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		Smart Card Read	<i>Optional:</i> Smart Card reader	
Optical	DVD burner, 9.5mm Ultrabay slim, removable		Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high		Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector	
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS		WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card	
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card		WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider	
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)		Ethernet	Intel Ethernet Connection I217-LM (Clarkville)	
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight		NFC	<i>Optional:</i> Near Field Communication	
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		Security	Power-on password, hard disk password, supervisor password, security keyhole	
ThinkLight™	None		Security chip	Trusted Platform Module, TCG 1.2-compliant	
Dimensions ³	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm		vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models	
Weight ²			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor	
	<i>Models</i>	<i>6-cell</i>		<i>9-cell</i>	
	<i>Integrated</i>	4.70 lb / 2.14kg		4.92 lb / 2.23kg	
	<i>Optimus</i>	4.77 lb / 2.16kg		5.10 lb / 2.31kg	
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit	
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
Battery - life ¹⁰					
	<i>Models</i>	<i>6-cell</i>		<i>9-cell</i>	
	<i>Integrated</i>	7.4 hr		13.2 hr	
	<i>Optimus</i>	7.2 hr		12.7 hr	
AC adapter	65-watt, 90-watt, or 135-watt AC adapter				

See footnotes for more detailed information
US model(s) withdrawn effective October 2013

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(OA1-2) October 2013

ThinkPad T440p 20AN (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AN006LUS	i7-4600M	8GBx1	14" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006MUS	i7-4600M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN006NUS	i5-4300M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20AN007HUS	i7-4600M	4GBx2	14" HD+	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	11/13
20AN007JUS	i5-4300M	4GBx1	14" HD+	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	11/13
20AN0096US	i7-4600M	8GBx1	14" HD+	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	01/14
20AN009CUS	i7-4600M	8GBx1	14" HD+	GT 730M	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	01/14
20AN00ANUS	i7-4700MQ	8GBx1	14" HD+	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	9	135W	Win7 P64 DG Win8	3-Depot	No	03/14
20AN00APUS	i5-4300M	8GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	No	03/14
20AN000SUS	i5-4300M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64	3-Depot	No	10/13
20AN000TUS	i7-4600M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64	3-Depot	No	10/13
20AN000UUS	i7-4600M	8GBx1	14" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64	3-Depot	No	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor		Chipset	Mobile Intel QM87 Express Chipset	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector	
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
M.2 SSD			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS		WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider	
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)		Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication	
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models	
ThinkLight™	None		Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor	
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm		Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit	
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication				
Battery - life ¹⁰					
AC adapter	65-watt, 90-watt, or 135-watt AC adapter				

See footnotes for more detailed information
US model(s) withdrawn effective October 2013

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(OA1-3) March 2014

ThinkPad T440p 20AW

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW0090US	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AW0091US	i5-4300M	8GBx1	14" HD+	HD 4600	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AW004BUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AW004DUS	i5-4300M	4GBx2	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AW004HUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AW004JUS	i5-4300M	4GBx2	14" FHD	HD 4600	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AW004KUS	i5-4300M	4GBx2	14" FHD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Depot	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
M.2 SSD				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models
ThinkLight™	None			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic			Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication				
	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>		
	<i>Integrated</i>	7.4 hr	13.2 hr		
Battery - type					
Battery - life ¹⁰					
AC adapter					
	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>		
	<i>Integrated</i>	7.2 hr	12.7 hr		

See footnotes for more detailed information

ThinkPad T440p 20AW (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW0000US	i5-4300M	4GBx1	14" HD	HD 4600	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW0001US	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW0005US	i5-4300M	4GBx1	14" HD+	HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW0007US	i5-4300M	4GBx1	14" HD+	HD 4600	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW0008US	i5-4300M	4GBx1	14" FHD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW000CUS	i5-4300M	4GBx1	14" HD	HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW000DUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW000HUS	i7-4600M	4GBx1	14" FHD	HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW000KUS	i7-4600M	4GBx1	14" FHD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW000MUS	i7-4600M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13
20AW000QUS	i7-4600M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Depot	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor		Chipset	Mobile Intel QM87 Express Chipset	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector	
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card		Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
M.2 SSD			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card	
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS		WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider	
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)		Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication	
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models	
ThinkLight™	None		Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor	
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm		Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit	
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication				
Battery - life ¹⁰					
AC adapter	65-watt, 90-watt, or 135-watt AC adapter				

See footnotes for more detailed information

ThinkPad T440p 20AW (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW008YUS	i7-4600M	8GBx1	14" HD+	GT 730M	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AW0092US	i5-4300M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AW0094US	i7-4600M	8GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AW004AUS	i7-4600M	4GBx1	14" FHD	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AW004CUS	i7-4600M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AW004FUS	i5-4300M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Depot	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset										
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector										
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack										
M.2 SSD				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card										
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS										
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider										
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication										
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models										
ThinkLight™	None			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor										
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit										
	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>4.70 lb / 2.14kg</td><td>4.92 lb / 2.23kg</td></tr><tr><td><i>Optimus</i></td><td>4.77 lb / 2.16kg</td><td>5.10 lb / 2.31kg</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	4.70 lb / 2.14kg	4.92 lb / 2.23kg	<i>Optimus</i>	4.77 lb / 2.16kg	5.10 lb / 2.31kg	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>													
<i>Integrated</i>	4.70 lb / 2.14kg	4.92 lb / 2.23kg													
<i>Optimus</i>	4.77 lb / 2.16kg	5.10 lb / 2.31kg													
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic														
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication														
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>7.4 hr</td><td>13.2 hr</td></tr><tr><td><i>Optimus</i></td><td>7.2 hr</td><td>12.7 hr</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	7.4 hr	13.2 hr	<i>Optimus</i>	7.2 hr	12.7 hr			
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>													
<i>Integrated</i>	7.4 hr	13.2 hr													
<i>Optimus</i>	7.2 hr	12.7 hr													
AC adapter	65-watt, 90-watt, or 135-watt AC adapter														

See footnotes for more detailed information

ThinkPad T440p 20AW (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW0006US	i7-4600M	4GBx1	14" FHD	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win8 P64	3-Depot	Yes	10/13
20AW0009US	i7-4600M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win8 P64	3-Depot	Yes	10/13
20AW000AUS	i7-4600M	4GBx1	14" FHD	GT 730M	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win8 P64	3-Depot	Yes	10/13
20AW000GUS	i5-4300M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win8 P64	3-Depot	Yes	10/13
20AW000RUS	i7-4600M	4GBx1	14" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win8 P64	3-Depot	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
M.2 SSD				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models
ThinkLight™	None			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic			Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication				
Battery - type					
Battery - life ¹⁰					
AC adapter					

See footnotes for more detailed information

ThinkPad T440p 20AW (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW0046US	i5-4300M	4GBx2	14" FHD	HD 4600	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AW0048US	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AW0049US	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AW004LUS	i5-4300M	4GBx2	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AW004MUS	i5-4300M	4GBx2	14" FHD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win7 P64 DG Win8	3-Onsite	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset										
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector										
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack										
M.2 SSD				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card										
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS										
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider										
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication										
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models										
ThinkLight™	None			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor										
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit										
	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>4.70 lb / 2.14kg</td><td>4.92 lb / 2.23kg</td></tr><tr><td><i>Optimus</i></td><td>4.77 lb / 2.16kg</td><td>5.10 lb / 2.31kg</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	4.70 lb / 2.14kg	4.92 lb / 2.23kg	<i>Optimus</i>	4.77 lb / 2.16kg	5.10 lb / 2.31kg	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>													
<i>Integrated</i>	4.70 lb / 2.14kg	4.92 lb / 2.23kg													
<i>Optimus</i>	4.77 lb / 2.16kg	5.10 lb / 2.31kg													
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic														
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication														
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>7.4 hr</td><td>13.2 hr</td></tr><tr><td><i>Optimus</i></td><td>7.2 hr</td><td>12.7 hr</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	7.4 hr	13.2 hr	<i>Optimus</i>	7.2 hr	12.7 hr			
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>													
<i>Integrated</i>	7.4 hr	13.2 hr													
<i>Optimus</i>	7.2 hr	12.7 hr													
AC adapter	65-watt, 90-watt, or 135-watt AC adapter														

See footnotes for more detailed information

ThinkPad T440p 20AW (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW0002US	i5-4300M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Onsite	Yes	10/13
20AW0003US	i5-4300M	4GBx1	14" HD+	HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Onsite	Yes	10/13
20AW0004US	i5-4300M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Onsite	Yes	10/13
20AW0000EUS	i5-4300M	4GBx1	14" HD+	HD 4600	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Onsite	Yes	10/13
20AW0000JUS	i7-4600M	4GBx1	14" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Onsite	Yes	10/13
20AW0000LUS	i7-4600M	4GBx1	14" HD+	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	6	65W	Win8 P64	3-Onsite	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
M.2 SSD				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models
ThinkLight™	None			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
Case material	<i>Models</i>				
	<i>Integrated</i>				
	<i>Optimus</i>				
Battery - type Battery - life ¹⁰	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic				
	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication				
	<i>Models</i>				
AC adapter	<i>Integrated</i>				
	<i>Optimus</i>				
	65-watt, 90-watt, or 135-watt AC adapter				

See footnotes for more detailed information

ThinkPad T440p 20AW (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW0047US	i5-4300M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AW004EUS	i7-4600M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AW004GUS	i7-4600M	4GBx1	14" FHD	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win7 P64 DG Win8	3-Onsite	Yes	11/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor				Chipset	Mobile Intel QM87 Express Chipset			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets				Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector			
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack			
M.2 SSD					WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card			
Widescreen display	Some: 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS				WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS			
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider			
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)				Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) Optional: Near Field Communication			
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models			
ThinkLight™	None				Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm				Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit			
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Carbon-Fiber Reinforced Plastic				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
Battery - type Battery - life ¹⁰	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication								
AC adapter	65-watt, 90-watt, or 135-watt AC adapter								

See footnotes for more detailed information

ThinkPad T440p 20AW (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AW000BUS	i7-4600M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win8 P64	3-Onsite	Yes	10/13
20AW000PUS	i5-4300M	4GBx1	14" HD+	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	9	90W	Win8 P64	3-Onsite	Yes	10/13

• For detailed platform specifications, please see [ThinkPad T440p Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset									
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector									
Optical Ultrabay SATA disk	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
M.2 SSD				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 or 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio, IPS			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider									
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication									
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Security Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models									
ThinkLight™	None			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor									
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.2" x 9.02" x 1.10-1.18"; 335mm x 229.1mm x 27.9-29.95mm			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit									
Case material	<i>Display cover:</i> Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite									
Battery - type Battery - life ¹⁰	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication													
	<table><tr><td>Models</td><td>6-cell</td><td>9-cell</td></tr><tr><td>Integrated</td><td>4.70 lb / 2.14kg</td><td>4.92 lb / 2.23kg</td></tr><tr><td>Optimus</td><td>4.77 lb / 2.16kg</td><td>5.10 lb / 2.31kg</td></tr></table>	Models	6-cell	9-cell	Integrated	4.70 lb / 2.14kg	4.92 lb / 2.23kg	Optimus	4.77 lb / 2.16kg	5.10 lb / 2.31kg				
Models	6-cell	9-cell												
Integrated	4.70 lb / 2.14kg	4.92 lb / 2.23kg												
Optimus	4.77 lb / 2.16kg	5.10 lb / 2.31kg												
	<table><tr><td>Models</td><td>6-cell</td><td>9-cell</td></tr><tr><td>Integrated</td><td>7.4 hr</td><td>13.2 hr</td></tr><tr><td>Optimus</td><td>7.2 hr</td><td>12.7 hr</td></tr></table>	Models	6-cell	9-cell	Integrated	7.4 hr	13.2 hr	Optimus	7.2 hr	12.7 hr				
Models	6-cell	9-cell												
Integrated	7.4 hr	13.2 hr												
Optimus	7.2 hr	12.7 hr												
AC adapter	65-watt, 90-watt, or 135-watt AC adapter													

See footnotes for more detailed information



Lenovo® ThinkPad T440s



Lenovo ThinkPad T440s



Lenovo ThinkPad T440s



Lenovo ThinkPad T440s



Lenovo ThinkPad T440s

ThinkPad T440s Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Premium Ultrabook™ or Thinbook; one spindle								
Processor	4th Generation Intel® Core™ i5 / i7 Processor								
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology
	i5-4200U	2	4	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Intel HD graphics 4400	No
	i5-4300U			1.9 GHz	2.9 GHz	3MB		Yes	
	i7-4600U			2.1 GHz	3.3 GHz	4MB		Yes	
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket								
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™								
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card								
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080) color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS								
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture								
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus								
Graphics	Intel HD Graphics 4400 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)								
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch								
ThinkLight™	None								
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm								
Weight ²	Models	3-cell + 3-cell			3-cell + 6-cell				
	Non-MultiTouch	3.5 lb / 1.59kg			3.9 lb / 1.77kg				
	MultiTouch	3.9 lb / 1.76kg			4.2 lb / 1.94kg				
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy								
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication								
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication								
Battery - life ¹⁰	Battery configuration	3-cell + 3-cell			3-cell + 6-cell 47.5Wh		3-cell + 6-cell 72Wh		
	Battery life	8.4 hr			12.6 hr		16.8 hr		
AC adapter	45-watt AC adapter								
Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)								
Smart Card Read	Optional: Smart Card reader, exclusive with M.2 SSD								
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)								
Ports	Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector								
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack								
WLAN ⁴	One of the following, configurable by model: • ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card • Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card								
WWAN (optional)	One of the following, configurable by model (mutually exclusive with M.2 SSD): • Wireless WAN upgradable • Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card								
SIM card (optional)	One of the following, configurable by model: • AT&T® or Verizon® LTE (4G), contract required with service provider • User selectable, contract required with service provider								
Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication								
NFC	Optional: Near Field Communication								
Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models								
Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor								
Limited warranty ¹²	One of the following, configurable by model: • 1-year - depot repair service / service upgrades ²² available • 3-years/1-yr battery - depot repair service / service upgrades available • 3-years/1-yr battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available For Lenovo service upgrade options, please go to S-TA sheet								
Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit • Lenovo Solution Center • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • Lenovo Cloud Storage by SugarSync • PC Device Stage • Adobe® Reader® • Nitro Pro • Evernote® • Skype™ • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit • Lenovo Solution Center • Lenovo Support • Lenovo Companion • ThinkVantage System Update • Lenovo Reach (Window 8.1 model) • Hightail - Metro (Window 8.1 model) • Lenovo Cloud Storage by SugarSync - Metro (Window 8 model) • Lenovo Cloud Storage by SugarSync (Window 8 model) • PC Device Stage • AccuWeather • Amazon Kindle • Nitro Pro • Evernote • Skype • Rara Streaming • Norton Studio • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions)								
Environment	EPEAT™ Gold; ENERGY STAR® 5.0; GREENGUARD®; RoHS-compliant								

See footnotes for more detailed information

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(STG1-Spec) March 2014

ThinkPad T440s 20AQ (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	ext battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AQ003LUS	i5-4200U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64	1-Depot	No	09/13
20AQ005NUS	i5-4200U	4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	1-Depot	No	09/13
20AQ003MUS	i5-4200U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64	3-Depot	No	09/13
20AQ0047US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64	3-Depot	No	09/13
20AQ0048US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64	3-Depot	No	09/13
20AQ0049US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64	3-Depot	No	09/13
20AQ004AUS	i5-4300U	4GB	14" FHD	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64	3-Depot	No	09/13
20AQ004BUS	i5-4300U	4GB	14" FHD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64	3-Depot	No	09/13
20AQ004CUS	i7-4600U	4GB	14" HD+	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64	3-Depot	No	09/13
20AQ004DUS	i7-4600U	4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64	3-Depot	No	09/13
20AQ005PUS	i5-4200U	4GB	14" HD+	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Depot	No	09/13
20AQ005QUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Depot	No	09/13
20AQ005SUS	i5-4300U	4GB	14" FHD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Depot	No	09/13
20AQ005VUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	09/13
20AQ005WUS	i7-4600U	4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	09/13
20AQ005TUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	10/13
20AQ005UUS	i5-4300U	4GB	14" FHD	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	10/13
20AQ005XUS	i7-4600U	4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	10/13
20AQ005YUS	i7-4600U	4GB	14" FHD	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	10/13
20AQ006FUS	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	11/13
20AQ006GUS	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	11/13
20AQ006HUS	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	11/13
20AQ006JUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	11/13

61=6-cell 47.5Wh; 62=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)												
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector												
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card												
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication												
Graphics	Intel HD Graphics 4400 in processor			NFC	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Security chip													
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch			vPro & iAMT													
ThinkLight™	None			Fingerprint reader													
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit												
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td colspan="2">3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>3.5 lb / 1.59kg</td><td colspan="2">3.9 lb / 1.77kg</td></tr><tr><td>MultiTouch</td><td>3.9 lb / 1.76kg</td><td colspan="2">4.2 lb / 1.94kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell		Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg		MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
Models	3-cell + 3-cell	3-cell + 6-cell															
Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg															
MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg															
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy																
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication																
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication																
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.4 hr</td><td>12.6 hr</td><td>16.8 hr</td></tr></table>			Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.4 hr	12.6 hr	16.8 hr						
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh														
Battery life	8.4 hr	12.6 hr	16.8 hr														
AC adapter	45-watt AC adapter																

See footnotes for more detailed information

US model(s) withdrawn effective October 2013

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(STG1-1) November 2013

ThinkPad T440s 20AQ (TopSeller) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	ext battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AQ008FUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	03/14
20AQ008GUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	500G 7200 OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	No	03/14

6'=6-cell 47.5Wh; 6°=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)									
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector									
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider									
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication									
Graphics	Intel HD Graphics 4400 in processor			Security Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models									
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor									
ThinkLight™	None			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit									
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite									
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>3.5 lb / 1.59kg</td><td>3.9 lb / 1.77kg</td></tr><tr><td>MultiTouch</td><td>3.9 lb / 1.76kg</td><td>4.2 lb / 1.94kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg		
Models	3-cell + 3-cell	3-cell + 6-cell												
Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg												
MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg												
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy													
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication													
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication													
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.4 hr</td><td>12.6 hr</td><td>16.8 hr</td></tr></table>			Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.4 hr	12.6 hr	16.8 hr			
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh											
Battery life	8.4 hr	12.6 hr	16.8 hr											
AC adapter	45-watt AC adapter													

See footnotes for more detailed information

ThinkPad T440s 20AQ (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	ext battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AQ004EUS	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Depot	No	09/13
20AQ004FUS	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	No	09/13
20AQ004GUS	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	No	09/13
20AQ004HUS	i7-4600U	4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	No	09/13
20AQ004JUS	i7-4600U	4+4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	No	09/13
20AQ004KUS	i7-4600U	4GB	14" FHD	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	No	09/13
20AQ006DUS	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	No	11/13
20AQ006EUS	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	No	11/13
20AQ0071US	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8.1 P64	3-Depot	No	01/14
20AQ0074US	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8.1 P64	3-Depot	No	01/14
20AQ0072US	i7-4600U	4GB	14" FHD	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8.1 P64	3-Depot	No	01/14
20AQ0073US	i7-4600U	4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8.1 P64	3-Depot	No	01/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)		
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket			Smart Card Read Multicard Reader Ports	<i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector		
Optical SATA disk	None <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader <i>Some:</i> Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) FHD (1920x1080) , 300 nits, 700:1 contrast ratio			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS		
MultiTouch	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider		
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter <i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville) <i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville) <i>Optional:</i> Near Field Communication		
Graphics	Intel HD Graphics 4400 in processor			NFC	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models <i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor		
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit		
ThinkLight™	None			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm						
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell				
	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg				
	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg				
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy						
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication						
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication						
Battery - life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh			
	Battery life	8.4 hr	12.6 hr	16.8 hr			
AC adapter	45-watt AC adapter						

See footnotes for more detailed information

ThinkPad T440s 20AR

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit keyboard	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	ext battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AR002TUS	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR003XUS	i5-4300U	4+4GB	14" FHD	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR003YUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR0040US	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR0042US	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR0043US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR0045US	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR0047US	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR0049US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Depot	Yes	11/13
20AR006RUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AR006SUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AR006TUS	i7-4600U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20AR006UUS	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	3	Win7 P64 DG Win8.1	3-Depot	Yes	04/14

6'=6-cell 47.5Wh; 6'=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication
Graphics	Intel HD Graphics 4400 in processor			NFC	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models Fingerprint reader Optional: Fingerprint reader on the keyboard bezel, swipe sensor
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit
ThinkLight™	None			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm				
Weight ²	Models	3-cell + 3-cell	3-cell + 6-cell		
	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg		
	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg		
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy				
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication				
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication				
Battery - life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	
	Battery life	8.4 hr	12.6 hr	16.8 hr	
AC adapter	45-watt AC adapter				

See footnotes for more detailed information

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ThinkPad T440s 20AR (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	ext battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AR000UUS	i7-4600U	4+4GB	14" FHD		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR000VUS	i5-4300U	4+4GB	14" HD+		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	None	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR000WUS	i5-4300U	4GB	14" FHD		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR0013US	i5-4300U	4GB	14" HD+		HD 4400	No	500G 7200	None	7260 ac	upg	None	None	None	16GB	3	Win8 P64	3-Depot	Yes	09/13
20AR0014US	i5-4300U	4GB	14" HD+		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	None	None	16GB	3	Win8 P64	3-Depot	Yes	09/13
20AR0015US	i7-4600U	4GB	14" FHD	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Depot	Yes	09/13
20AR0017US	i7-4600U	4GB	14" FHD		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Depot	Yes	09/13
20AR0018US	i7-4600U	4+4GB	14" FHD		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR001AUS	i7-4600U	4+4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR001CUS	i5-4300U	4GB	14" HD+		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Depot	Yes	09/13
20AR001EUS	i5-4300U	4GB	14" FHD		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR001FUS	i5-4300U	4GB	14" HD+		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	None	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR001GUS	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR001HUS	i5-4300U	4+4GB	14" HD+		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Depot	Yes	09/13
20AR001MUS	i5-4300U	4GB	14" HD+		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR001QUS	i7-4600U	4+4GB	14" HD+		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Depot	Yes	09/13
20AR0059US	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8.1 P64	3-Depot	Yes	01/14
20AR005AUS	i5-4300U	4GB	14" FHD	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8.1 P64	3-Depot	Yes	01/14
20AR0057US	i7-4600U	4GB	14" FHD	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8.1 P64	3-Depot	Yes	01/14
20AR0058US	i7-4600U	4GB	14" FHD	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8.1 P64	3-Depot	Yes	01/14

6"=6-cell 47.5Wh; 6"=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)												
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector												
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card												
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS												
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider												
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication												
Graphics	Intel HD Graphics 4400 in processor			NFC													
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			Security	Power-on password, hard disk password, supervisor password, security keyhole												
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch			Security chip vPro & iAMT	Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models												
ThinkLight™	None			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor												
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit												
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td colspan="2">3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>3.5 lb / 1.59kg</td><td colspan="2">3.9 lb / 1.77kg</td></tr><tr><td>MultiTouch</td><td>3.9 lb / 1.76kg</td><td colspan="2">4.2 lb / 1.94kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell		Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg		MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
Models	3-cell + 3-cell	3-cell + 6-cell															
Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg															
MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg															
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy																
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication																
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication																
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.4 hr</td><td>12.6 hr</td><td>16.8 hr</td></tr></table>			Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.4 hr	12.6 hr	16.8 hr						
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh														
Battery life	8.4 hr	12.6 hr	16.8 hr														
AC adapter	45-watt AC adapter																

See footnotes for more detailed information

ThinkPad T440s 20AR (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	ext battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AR003TUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR003UUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR003VUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR003WUS	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR0041US	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR0044US	i7-4600U	4+4GB	14" FHD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR0046US	i5-4300U	4+4GB	14" FHD	No	HD 4400	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR0048US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13
20AR004AUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3	Win7 P64 DG Win8	3-Onsite	Yes	11/13

6'=6-cell 47.5Wh; 6'=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)											
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector											
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card											
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS											
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider											
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication											
Graphics	Intel HD Graphics 4400 in processor			NFC	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and iAMT vPro and Intel Active Management Technology (iAMT) support on selected models Fingerprint reader Optional: Fingerprint reader on the keyboard bezel, swipe sensor											
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit											
ThinkLight™	None			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite											
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm															
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>3.5 lb / 1.59kg</td><td>3.9 lb / 1.77kg</td></tr><tr><td>MultiTouch</td><td>3.9 lb / 1.76kg</td><td>4.2 lb / 1.94kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg				
Models	3-cell + 3-cell	3-cell + 6-cell														
Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg														
MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg														
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy															
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication															
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication															
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.4 hr</td><td>12.6 hr</td><td>16.8 hr</td></tr></table>			Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.4 hr	12.6 hr	16.8 hr					
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh													
Battery life	8.4 hr	12.6 hr	16.8 hr													
AC adapter	45-watt AC adapter															

See footnotes for more detailed information

ThinkPad T440s 20AR (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Multi-touch	Graphics	Camera	Storage	Backlit keyboard	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	ext battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AR000TUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Onsite	Yes	09/13
20AR000XUS	i5-4300U	4GB	14" FHD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Onsite	Yes	09/13
20AR000YUS	i7-4600U	4GB	14" FHD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Onsite	Yes	09/13
20AR0010US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3	Win8 P64	3-Onsite	Yes	09/13
20AR0011US	i7-4600U	4+4GB	14" HD+	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Onsite	Yes	09/13
20AR0012US	i5-4300U	4GB	14" HD+	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	None	None	None	3	Win8 P64	3-Onsite	Yes	09/13
20AR0016US	i5-4300U	4GB	14" FHD	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Onsite	Yes	09/13
20AR001BUS	i5-4300U	4+4GB	14" HD+	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	None	None	None	3	Win8 P64	3-Onsite	Yes	09/13
20AR001DUS	i5-4300U	4GB	14" HD+	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3	Win8 P64	3-Onsite	Yes	09/13

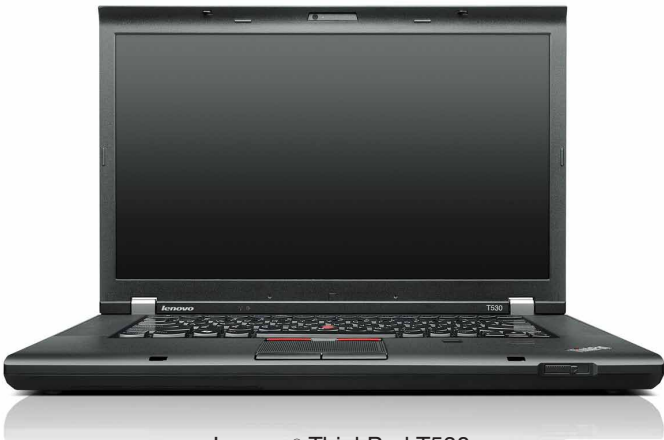
6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad T440s Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor			Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)											
Memory	12GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket			Smart Card Read Multicard Reader Ports	Optional: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector											
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card											
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS											
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture			SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider											
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication											
Graphics	Intel HD Graphics 4400 in processor			NFC	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and iAMT vPro and Intel Active Management Technology (iAMT) support on selected models Optional: Fingerprint reader on the keyboard bezel, swipe sensor											
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch			Security chip	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and iAMT vPro and Intel Active Management Technology (iAMT) support on selected models Optional: Fingerprint reader on the keyboard bezel, swipe sensor											
ThinkLight™	None			Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor											
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.81; 331mm x 226mm x 20.65mm 14.0W" MultiTouch (WxDxH): 13.0" x 8.9" x 0.90; 331mm x 226mm x 22.94mm			Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit											
Weight ²	<table><tr><td>Models</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell</td></tr><tr><td>Non-MultiTouch</td><td>3.5 lb / 1.59kg</td><td>3.9 lb / 1.77kg</td></tr><tr><td>MultiTouch</td><td>3.9 lb / 1.76kg</td><td>4.2 lb / 1.94kg</td></tr></table>			Models	3-cell + 3-cell	3-cell + 6-cell	Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg	MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
Models	3-cell + 3-cell	3-cell + 6-cell														
Non-MultiTouch	3.5 lb / 1.59kg	3.9 lb / 1.77kg														
MultiTouch	3.9 lb / 1.76kg	4.2 lb / 1.94kg														
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy															
Internal battery	Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication															
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication															
Battery - life ¹⁰	<table><tr><td>Battery configuration</td><td>3-cell + 3-cell</td><td>3-cell + 6-cell 47.5Wh</td><td>3-cell + 6-cell 72Wh</td></tr><tr><td>Battery life</td><td>8.4 hr</td><td>12.6 hr</td><td>16.8 hr</td></tr></table>			Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	Battery life	8.4 hr	12.6 hr	16.8 hr					
Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh													
Battery life	8.4 hr	12.6 hr	16.8 hr													
AC adapter	45-watt AC adapter															

See footnotes for more detailed information

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(STG1-5) November 2013



Lenovo® ThinkPad T530



Lenovo ThinkPad T530



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ThinkPad T530 2359 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Finger print reader	Bat-Blue- tooth	tery Intel AMT	Intel vPro	Pre-load	Ann Date (mm/yy)
2359-2HU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	None	None	None	6 iAMT	vPro	Pro 64	06/12
2359-2GU	i5-3320M	4GBx2	15.6" HD	720p	320G 7200	None	Intel 6205	WWAN upg	None	None	None	6 iAMT	vPro	Pro 64	06/12
2359-2FU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	WWAN upg	None	None	None	6 iAMT	vPro	Pro 64	06/12
2359-2EU	i5-3210M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	None	6 None	None	Pro 64	06/12
2359-2DU	i5-3210M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	None	6 None	None	Pro 64	06/12
2359-2CU	i5-3210M	4GBx1	15.6" HD+	720p	320G 7200	None	Intel 2200	WWAN upg	None	None	None	6 None	None	Pro 64	06/12
2359-2BU	i5-3210M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 2200	WWAN upg	None	None	None	6 None	None	Pro 64	06/12

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>15.6W" (WxDxH):</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.39 lb (2.45kg); <i>9-cell:</i> starting at 5.76 lb (2.62kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.1 hr; <i>9-cell (94Whr):</i> up to 15.3 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 30.6 hr	
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 Wireless WAN upgradable None None None None Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant	
Security Security chip Fingerprint reader	None None None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

		Supports ThinkVantage® technologies
		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²
		For compatible accessories, please go to O-T530 sheet; For Lenovo service²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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 (KN4-1) June 2012

ThinkPad T530 2359 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2359-4DU	i5-3210M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	6	None	None	Win7 Pro64	10/12
2359-2YU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	None	None	6	iAMT	vPro	Win8 Pro64	10/12
2359-5CU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	6	None	None	Win8 Pro64	02/13
2359-4LU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	6	None	None	Win7 Pro64	02/13
2359-5JU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	None	6	iAMT	vPro	Win7 Pro64	04/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.39 lb (2.45kg); <i>9-cell:</i> starting at 5.76 lb (2.62kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.1 hr; <i>9-cell (94Whr):</i> up to 15.3 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 30.6 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None None None Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US model(s) withdrawn effective March 2013

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(KN4-9) April 2013

ThinkPad T530 2392 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Pre-load	Ann Date (mm/yy)
2392-4AU	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-49U	i7-3520M	4GBx2	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-48U	i7-3520M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-46U	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-44U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-43U	i5-3320M	4GBx2	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-42U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-3ZU	i5-3210M	4GBx1	15.6" HD+	720p	128G SSD	None	Intel 6205	WWAN upg	None	Finger	BT	6	None	None	Pro 64	06/12
2392-3YU	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	Gobi 3000	select	Finger	BT	6	iAMT	vPro	Pro 64	06/12
2392-3XU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	Gobi 3000	select	Finger	BT	6	iAMT	vPro	Pro 64	06/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.39 lb (2.45kg); <i>9-cell:</i> starting at 5.76 lb (2.62kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.1 hr; <i>9-cell (94Whr):</i> up to 15.3 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 30.6 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS		Supports ThinkVantage® technologies	
Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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 (KN4-2) June 2012

ThinkPad T530 2392 (TopSeller) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2392-6EU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Backlit	Intel 2200	WWAN upg	None	No	6	None	None	Pro 64	07/12
2392-6DU	i7-3520M	4GBx1	15.6" HD	720p	500G 7200	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	07/12
2392-6AU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	Backlit	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	07/12
2392-64U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Pro 64	07/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)	
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller			
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.39 lb (2.45kg); <i>9-cell:</i> starting at 5.76 lb (2.62kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.1 hr; <i>9-cell (94Whr):</i> up to 15.3 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 30.6 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)			
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		Supports ThinkVantage® technologies	
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information

ThinkPad T530 2392 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCle Mini Card WLAN	PCle Mini Card WWAN /mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2392-ARU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	iAMT	vPro	Win7 Pro64	10/12
2392-APU	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win7 Pro64	10/12
2392-ANU	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Win7 Pro64	10/12
2392-6HU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Backlit	Intel 2200	WWAN upg	None	No	6	None	None	Win8 Pro64	10/12
2392-6CU	i7-3520M	4GBx1	15.6" HD	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win8 Pro64	10/12
2392-6BU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win8 Pro64	10/12
2392-65U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win8 Pro64	10/12
2392-B3U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	None	No	6	iAMT	vPro	Win7 Pro64	10/12
2392-DYU	i5-3320M	4GBx1	15.6" HD+	720p	128G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	None	None	Win7 Pro64	02/13
2392-ECU	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	06/13
2392-FPU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	07/13
2392-FMU	i5-3320M	4GBx1	15.6" HD+	720p	256G SSD OPAL	None	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	07/13
2392-FJU	i5-3320M	4GBx1	15.6" HD+	720p	256G SSD OPAL	Backlit	Intel 6205	WWAN upg	None	BT	6	iAMT	vPro	Win7 Pro64	07/13
2392-FHU	i5-3320M	4GBx1	15.6" HD+	720p	256G SSD OPAL	Backlit	Intel 6205	WWAN upg	Finger	BT	6	iAMT	vPro	Win7 Pro64	07/13
Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed)				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										- Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut										- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)				
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 3000 or 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)										- All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™				
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm 6-cell: starting at 5.39 lb (2.45kg); 9-cell: starting at 5.76 lb (2.62kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 9.1 hr; 9-cell (94Whr): up to 15.3 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 30.6 hr														
Chipset ExpressCard Smart Card Reader Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)														
PCle Mini Card PCle WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCle Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino Advanced-N 6205, 2x2										Supports ThinkVantage® technologies				
PCle WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None None Some: Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1 Some: Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole										65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip										For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information

ThinkPad T530 2392 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload (mm/yy)	Ann Date
2392-4EU	i7-3520M	4GBx2	15.6" FHD	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	06/12
2392-4DU	i7-3520M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	06/12
2392-4CU	i7-3520M	4GBx2	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	06/12
2392-4BU	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	06/12
2392-47U	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	06/12
2392-45U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	06/12
2392-6FU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Backlit	Intel 2200	WWAN upg	None	No	6	None	None	Pro 64	07/12
2392-69U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	07/12
2392-66U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Pro 64	07/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 or 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>15.6W" (WxDxH):</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.73 lb (2.60kg); <i>9-cell:</i> starting at 6.10 lb (2.77kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr	
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2	Supports ThinkVantage® technologies
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant	90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

ThinkPad T530 2392 (Optimus) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB ⁹ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2392-ASU	i7-3520M	4GBx1	15.6" HD+	500G 7200	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	iAMT	vPro	Win7 Pro64	10/12
2392-AQU	i5-3320M	4GBx1	15.6" HD+	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Win7 Pro64	10/12
2392-6GU	i5-2520M	4GBx1	15.6" HD	500G 7200	Backlit	Intel 2200	WWAN upg	None	No	6	None	None	Win8 Pro64	10/12
2392-68U	i7-3520M	4GBx1	15.6" HD+	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Win8 Pro64	10/12
2392-67U	i5-3320M	4GBx1	15.6" HD+	500G 7200	Backlit	Intel 6205	WWAN upg	Finger	BT	9	iAMT	vPro	Win8 Pro64	10/12
2392-EDU	i5-3320M	4GBx1	15.6" HD+	500G 7200	None	Intel 6205	WWAN upg	None	BT	9	iAMT	vPro	Win7 Pro64	06/13
2392-FSU	i7-3520M	4GBx1	15.6" HD+	256G SSD OPAL	None	Intel 6205	WWAN upg	None	BT	9	iAMT	vPro	Win7 Pro64	07/13
2392-FQU	i7-3520M	4GBx1	15.6" HD+	500G 7200	None	Intel 6205	WWAN upg	None	BT	9	iAMT	vPro	Win7 Pro64	07/13
2392-FNU	i5-3320M	4GBx1	15.6" HD+	256G SSD OPAL	None	Intel 6205	WWAN upg	None	BT	9	iAMT	vPro	Win7 Pro64	07/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller										Preloaded applications⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none"> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none"> • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™ 				
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 or 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)														
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm 6-cell: starting at 5.73 lb (2.60kg); 9-cell: starting at 6.10 lb (2.77kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 7.7 hr; 9-cell (94Whr): up to 12.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 25.6 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)														
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2														
PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack														
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available										Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Smart Card Reader	Finger print reader	Bat-Blue- tery cells	Global (G) Intel vPro (P)	Ann Date (mm/yy)
2394-5UU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205 ²⁸	upg	None	Finger	BT 6	vPro	06/12
2394-5VU	i5-3320M	4GBx1	15.6" HD+	720p	128G SSD	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-5YU	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-62U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-63U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-64U	i5-3320M	4GBx1	15.6" HD	None	320G 7200	None	Intel 6205	upg	Smart	None	9	vPro	06/12
2394-36U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	Gobi select	None	Finger	BT 6	vPro	06/12
2394-35U	i7-3520M	4GBx1	15.6" HD	None	500G 7200	None	Intel 6205	upg	None	None	No 6	vPro	06/12
2394-34U	i5-3320M	4GBx1	15.6" HD	None	320G 7200	None	Intel 6205	upg	None	None	No 6	vPro	06/12
2394-2SU	i5-3320M	4GBx1	15.6" HD+	720p	320G 7200	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-2GU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-23U	i7-3520M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-22U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	upg	None	Finger	BT 6	vPro	06/12
2394-70U	i5-3320M	4GBx1	15.6" HD+	720p	320G 7200	None	Intel 6205	upg	Smart	Finger	BT 6	vPro	07/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut	
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.39 lb (2.45kg); <i>9-cell:</i> starting at 5.76 lb (2.62kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.1 hr; <i>9-cell (94Whr):</i> up to 15.3 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 30.6 hr	
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS	Supports ThinkVantage® technologies
Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹² 3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

ThinkPad T530 2394 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth cells	Bat-tery	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
2394-6EU	i7-3520M	4GBx1	15.6" HD	None	500G 7200	None	Intel 6205 ²⁸	WWAN upg	None	No	6	vPro		Win8 Pro64	10/12
2394-6DU	i5-3320M	4GBx1	15.6" HD	None	320G 7200	None	Intel 6205	WWAN upg	None	No	6	vPro		Win8 Pro64	10/12
2394-42U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Win8 Pro64	10/12
2394-43U	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Win8 Pro64	10/12
2394-44U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Win8 Pro64	10/12
2394-45U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G	Win8 Pro64	10/12
2394-7NU	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win7 Pro64	12/12
2394-7MU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro		Win7 Pro64	12/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut		
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.39 lb (2.45kg); <i>9-cell:</i> starting at 5.76 lb (2.62kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 9.1 hr; <i>9-cell (94Whr):</i> up to 15.3 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 30.6 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole		
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹² 3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information

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ThinkPad T530 2394 (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) Intel vPro (P)	Ann Date (mm/yy)
2394-5RU	i7-3520M	4GBx1	15.6" FHD	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2394-5TU	i7-3520M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2394-5WU	i7-3520M	4GBx1	15.6" FHD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2394-5XU	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2394-5ZU	i5-3320M	4GBx1	15.6" FHD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2394-61U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12
2394-65U	i5-3320M	4GBx1	15.6" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro G	Pro 64 06/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000. DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller												
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive												
mSATA™ SSD	None												
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)												
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³	<i>15.6W"</i> (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm												
Weight ²	<i>6-cell:</i> starting at 5.73 lb (2.60kg); <i>9-cell:</i> starting at 6.10 lb (2.77kg)												
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint												
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication												
Battery - life ¹⁰	<i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr												
Chipset	Mobile Intel QM77 Express Chipset												
ExpressCard	One slot (ExpressCard/34)												
Smart Card Read	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)												
PCIe Mini Card	Two PCI Express Mini Card slots												
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2												
PCIe WWAN	Wireless WAN upgradable												
Carrier	None												
Modem	None												
IEEE 1394	IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)												
Bluetooth™	Bluetooth 4.0 wireless												
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1												
Intel AMT	Intel Active Management Technology (iAMT)												
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available									Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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ThinkPad T530 2394 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Battery cells	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
2394-41U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	Finger	9	vPro	G	Win8 Pro64	10/12
2394-7PU	i7-3520M	4GBx1	15.6" HD+	720p	180G SSD	Backlit	Intel 6205	WWAN upg	Finger	9	vPro		Win7 Pro64	12/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Adobe® Reader®• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.73 lb (2.60kg); <i>9-cell:</i> starting at 6.10 lb (2.77kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr	
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available	

90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Mini Card Carrier	Smart Card Reader	Finger print reader	Bat-Blue-tooth	tery cells	Global (G) Intel vPro	GMP (P)	Pre-load	Ann Date (mm/yy)
2429-5UU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205 ²⁸	upg	None	None	Finger	BT	6	vPro	G P	Pro 64	06/12
2429-5VU	i5-3320M	4GBx1	15.6" HD+	720p	128G SSD	None	Intel 6205	upg	None	None	Finger	BT	6	vPro	G P	Pro 64	06/12
2429-5YU	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	upg	None	None	Finger	BT	6	vPro	G P	Pro 64	06/12
2429-62U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	upg	None	None	Finger	BT	6	vPro	G P	Pro 64	06/12
2429-64U	i5-3320M	4GBx1	15.6" HD+	720p	320G 7200	None	Intel 6205	upg	None	None	Finger	BT	6	vPro	G P	Pro 64	06/12
2429-2EU	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	Gobi select	None	None	Finger	BT	6	vPro		Pro 64	06/12
2429-2CU	i7-3520M	4GBx1	15.6" HD	None	500G 7200	None	Intel 6205	upg	None	None	None	No	6	vPro		Pro 64	06/12
2429-2BU	i5-3320M	4GBx1	15.6" HD	None	320G 7200	None	Intel 6205	upg	None	None	None	No	6	vPro		Pro 64	06/12
2429-26U	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	upg	None	None	Finger	BT	6	vPro		Pro 64	06/12
2429-23U	i7-3520M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	upg	None	None	Finger	BT	6	vPro	G P	Pro 64	06/12
2429-22U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	upg	None	None	Finger	BT	6	vPro	G P	Pro 64	06/12
2429-70U	i5-3320M	4GBx1	15.6" HD+	720p	320G 7200	None	Intel 6205	upg	None	Smart	Finger	BT	6	vPro	G P	Pro 64	07/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology			Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Intel Small Business Advantage• RapidBoot HDD Accelerator• Symantec™ VIP• Windows Live™ Essentials• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller					
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive					
mSATA™ SSD	None					
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut					
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus					
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)					
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions					
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm 6-cell: starting at 5.39 lb (2.45kg); 9-cell: starting at 5.76 lb (2.62kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint					
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 9.1 hr; 9-cell (94Whr): up to 15.3 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 30.6 hr					
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)					
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS					
Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack			Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			For compatible accessories, please go to O-T530 sheet;		
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available			For Lenovo service ²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

ThinkPad T530 2429 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth cells	Bat-tery vPro	Global (G) Intel vPro GMP (P)	Preload	Ann Date (mm/yy)
2429-42U	i7-3520M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	6	vPro	G P Win8 Pro64	10/12
2429-43U	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G P Win8 Pro64	10/12
2429-44U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G P Win8 Pro64	10/12
2429-45U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	G P Win8 Pro64	10/12
2429-7DU	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	Win7 Pro64	12/12
2429-7CU	i5-3320M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	6	vPro	Win7 Pro64	12/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller													
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high</i> <i>Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™</i> <i>All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive</i>													
mSATA™ SSD	None													
Widescreen display	<i>Some: 15.6" (396mm) HD (1366x768) color</i> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some: 15.6" (396mm) HD+ (1600x900) color</i> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some: 15.6" (396mm) Full HD (1920x1080) color</i> , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)</i>													
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³ Weight ² Case material	<i>15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm</i> <i>6-cell: starting at 5.39 lb (2.45kg); 9-cell: starting at 5.76 lb (2.62kg)</i> <i>Display cover: Carbon-fiber / Glass-fiber hybrid;</i> <i>Bottom: Glass-fiber reinforced plastic without paint</i> Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr): up to 9.1 hr; 9-cell (94Whr): up to 15.3 hr;</i> <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 30.6 hr</i>													
Battery - type Battery - life ¹⁰														
Chipset ExpressCard Smart Card Reader Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)													
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant													
Security Security chip Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available										Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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ThinkPad T530 2429 (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) Intel vPro	GMP (P)	Preload (mm/yy)	Ann Date
2429-5RU	i7-3520M	4GBx1	15.6" FHD	720p	180G SSD	None	Intel 6205 ²⁸	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2429-5TU	i7-3520M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2429-5WU	i7-3520M	4GBx1	15.6" FHD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2429-5XU	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2429-5ZU	i5-3320M	4GBx1	15.6" FHD	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2429-61U	i5-3320M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2429-63U	i5-3320M	4GBx1	15.6" HD+	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12
2429-65U	i5-3320M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 6205	WWAN upg	Finger	BT	9	vPro	G P	Pro 64	06/12

• Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	<i>15.6W" (WxDxH):</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.73 lb (2.60kg); <i>9-cell:</i> starting at 6.10 lb (2.77kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		
For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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(KN4-7) June 2012

ThinkPad T530 2429 (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Battery cells	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
2429-41U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	None	Intel 6205 ²⁸	WWAN upg	Finger	9	vPro	G P	Win8 Pro64	10/12
2429-7FU	i7-3520M	4GBx1	15.6" HD+	720p	180G SSD	Backlit	Intel 6205	WWAN upg	Finger	9	vPro		Win7 Pro64	12/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Premiere performance; two spindles Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA NVS™ 5400M , PCI Express® x16, 1GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm 6-cell: starting at 5.73 lb (2.60kg); 9-cell: starting at 6.10 lb (2.77kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 7.7 hr; 9-cell (94Whr): up to 12.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 25.6 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant		
Security Security chip Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		
Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-T530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

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ThinkPad T530 Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann 06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann 06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann 06/05/12

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive 12.7mm Bay Adapter III	0A65623	ann 02/28/12
DVD Burner Ultrabay Enhanced Drive III	0A65625	ann 06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann 12/11/12
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65631	ann 06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65632	ann 06/05/12
1TB 5400rpm SATA 3.0Gb/s 9.5mm 4K HDD ⁴¹	0A65633	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65635	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm		
Self Encrypting (SED) OPAL Capable HDD ⁴¹	0A65636	ann 08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65629	ann 06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65630	ann 06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD ⁴¹	0A65620	ann 05/15/12

⁴¹ Can be used as the main HDD or with

Serial ATA Hard Drive 12.7mm Bay Adapter III 0A65623 in the Ultrabay.

USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 3000 Mobile Broadband	0A36185	ann 04/12/11
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ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
ThinkPad Port Replicator Series 3 with USB 3.0 ⁶²	433615W	ann 06/05/12
ThinkPad Mini Dock Series 3 - 90W	433710U	ann 06/23/09
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W ⁶²	433715U	ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W ⁶²	433815U	ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann 06/05/12

⁶² Compatible only with dual core models.

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann 06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann 01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

3M 15.6W Privacy Filter from Lenovo	0A61771	ann 04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

Batteries

ThinkPad Battery 70+ (6-cell)	0A36302	ann 06/05/12
ThinkPad Battery 70++ (9-cell)	0A36303	ann 06/05/12
ThinkPad Battery 28++ (9 cell, slice) ⁴³	0A36304	ann 06/05/12

⁴³ To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05
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⁴⁴ Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ^{45, 62}	40Y7696	ann 01/05/06
ThinkPad 90W AC Adapter ⁶²	40Y7659	ann 09/20/05
ThinkPad 135W AC Adapter	55Y9317	ann 01/07/10
90W Ultralim AC/DC Combo Adapter ⁶²	41R4493	ann 09/22/09

⁴⁵ Only compatible with the integrated graphics models.

⁶² Compatible only with dual core models.

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08
Lenovo Sport Backpack - Red	0A33896	ann 02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann 02/28/12
Lenovo Sport Messenger - Red	0A33898	ann 02/28/12
Lenovo Sport Backpack - Blue	0B47298	ann 08/28/12
Lenovo Sport Slimcase - Blue	0B47300	ann 08/28/12
Lenovo Sport Messenger - Blue	0B47299	ann 08/28/12
Lenovo Sport Backpack - Grey	0B47301	ann 08/28/12
Lenovo Sport Slimcase - Grey	0B47303	ann 08/28/12
Lenovo Sport Messenger - Grey	0B47302	ann 08/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) ⁶⁹	2578HB6	ann 10/20/09

⁶⁹ DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann 08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann 08/16/11

More information at www.lenovo.com/support/monitors
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann 08/14/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann 05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann 06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann 07/24/12
Lenovo USB Soundbar	0A36190	ann 05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad T540p



Lenovo ThinkPad T540p



Lenovo ThinkPad T540p



Lenovo ThinkPad T540p



Lenovo ThinkPad T540p

ThinkPad T540p Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Premiere performance; two spindles									Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack				
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor									WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none">• ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 Card• Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card				
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology						
	i3-4000M	2	4	2.4 GHz	-	3MB	DDR3L-1600	Intel HD Graphics 4600	No						
	i5-4200M			2.5 GHz	3.1 GHz	3MB			No						
	i5-4300M			2.6 GHz	3.3 GHz	3MB			Yes						
	i5-4330M			2.8 GHz	3.5 GHz	3MB			Yes						
	i7-4600M	4	8	2.9 GHz	3.6 GHz	4MB	Yes								
	i7-4700MQ			2.4 GHz	3.4 GHz	6MB	No								
	i7-4800MQ			2.7 GHz	3.7 GHz	6MB	Yes								
	i7-4900MQ			2.8 GHz	3.8 GHz	8MB	Yes								
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication				
Optical Ultrabay	DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access														
SATA disk	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card														
M.2 SSD										Security Security chip vPro & iAMT Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models <i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor				
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) color , anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, IPS														
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 4600 in processor only, or Intel HD Graphics 4600 in processor and NVIDIA GeForce® GT 730M, PCI Express® x8, 1GB memory, NVIDIA® Optimus™ technology; supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; <i>Max resolution:</i> 1920x1200@60Hz (VGA); 3840x2160@60Hz (DP via mDP cable)									Limited warranty ¹²	One of the following, configurable by model: <ul style="list-style-type: none">• 1-year - depot repair service / service upgrades²² available• 3-years/1-yr battery - depot repair service / service upgrades available• 3-years/1-yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available <i>For Lenovo service upgrade options, please go to S-TA sheet</i>				
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch														
ThinkLight™	None														
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm														
Weight ²	Models	6-cell			9-cell										
	Integrated	5.31 lb / 2.41kg			5.65 lb / 2.56kg										
	Optimus	5.43 lb / 2.46kg			5.80 lb / 2.63kg										
Case material	Glass-Fiber Reinforced Plastic												Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">• Lenovo Solution Center• ThinkVantage Product Recovery• Rescue and Recovery™• ThinkVantage System Update• Lenovo Cloud Storage by SugarSync• PC Device Stage• Adobe® Reader®• Nitro Pro• Evernote®• Skype™• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions)• Cyberlink PowerDVD (DVD±RW)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) <i>Some:</i> Windows 8 / 8.1 64-bit <i>Some:</i> Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">• Lenovo Solution Center• Lenovo Support• Lenovo Companion• ThinkVantage System Update• Lenovo Reach (Window 8.1 model)• Hightail - Metro (Window 8.1 model)• Lenovo Cloud Storage by SugarSync - Metro (Window 8 model)• Lenovo Cloud Storage by SugarSync (Window 8 model)• PC Device Stage• AccuWeather• Amazon Kindle• Nitro Pro• Evernote• Skype• Rara Streaming• Norton Studio• Microsoft Office preloaded; purchase a product key to activate• Norton Internet Security (30 days of virus definitions)• Cyberlink PowerDVD (DVD±RW)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)	
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication														
Battery - life ¹⁰	Models	6-cell			9-cell										
	Integrated	7 hr			12.5 hr										
	Optimus	6.2 hr			11 hr										
AC adapter	60-watt, 90-watt, or 135-watt AC adapter														
Chipset	Mobile Intel QM87 Express Chipset														
ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)														
Smart Card Read	<i>Optional:</i> Smart Card reader														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector														
For ISV certifications, please visit www.lenovo.com/support/ISV															
Environment															
EPEAT™ Gold; ENERGY STAR® 5.0; GREENGUARD®; RoHS-compliant															

See footnotes for more detailed information

ThinkPad T540p 20BE (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Cam-era	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Express card	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BE003AUS	i5-4200M	4GBx1	15.6" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	Yes	6	65W	Win7 P64 DG Win8	1-Depot	No	10/13
20BE003CUS	i5-4300M	4GBx1	15.6" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	Yes	6	65W	Win7 P64 DG Win8	1-Depot	No	10/13
20BE003DUS	i5-4300M	4GBx1	15.6" HD	HD 4600	720p	500G 7200	None	7260 b/g/n	upg	None	None	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003EUS	i5-4300M	4GBx1	15.6" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	None	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003FUS	i5-4300M	4GBx1	15.6" HD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003GUS	i5-4300M	4GBx1	15.6" HD	HD 4600	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003HUS	i5-4300M	4GBx1	15.6" FHD	HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003JUS	i5-4300M	4GBx1	15.6" FHD	HD 4600	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003KUS	i5-4300M	4GBx1	15.6" FHD	HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE004EUS	i5-4300M	4GBx1	15.6" FHD	HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	11/13
20BE0095US	i5-4300M	8GBx1	15.6" HD	HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8	3-Depot	No	03/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset									
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)									
Optical	DVD burner, 9.5mm Ultrabay slim, removable			Smart Card Read	<i>Optional:</i> Smart Card reader									
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector									
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider									
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									
ThinkLight™	None			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)									
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			NFC	<i>Optional:</i> Near Field Communication									
Weight ²	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>5.31 lb / 2.41kg</td><td>5.65 lb / 2.56kg</td></tr><tr><td><i>Optimus</i></td><td>5.43 lb / 2.46kg</td><td>5.80 lb / 2.63kg</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	Security	Power-on password, hard disk password, supervisor password, security keyhole
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg												
<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg												
Case material	Glass-Fiber Reinforced Plastic			Security chip	Trusted Platform Module, TCG 1.2-compliant									
Battery - type	Li-Ion 6-cell (<i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication			vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models									
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>7 hr</td><td>12.5 hr</td></tr><tr><td><i>Optimus</i></td><td>6.2 hr</td><td>11 hr</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	7 hr	12.5 hr	<i>Optimus</i>	6.2 hr	11 hr	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	7 hr	12.5 hr												
<i>Optimus</i>	6.2 hr	11 hr												
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit									
				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite									

See footnotes for more detailed information

ThinkPad T540p 20BE (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Express card	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BE003LUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003MUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003NUS	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003PUS	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003QUS	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003RUS	i7-4600M	4GBx1	15.5" 3K	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE003SUS	i7-4600M	4GBx1	15.5" 3K	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	10/13
20BE004FUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	11/13
20BE004GUS	i7-4600M	4GBx2	15.6" FHD	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	11/13
20BE007YUS	i7-4600M	8GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	01/14
20BE0085US	i7-4600M	8GBx1	15.6" FHD	GT 730M	720p	240G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win7 P64 DG Win8	3-Depot	No	01/14
20BE0096US	i7-4700MQ	8GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	No	9	135W	Win7 P64 DG Win8	3-Depot	No	03/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)
				Smart Card Read	<i>Optional:</i> Smart Card reader
Optical Ultrabay	DVD burner, 9.5mm Ultrabay slim, removable			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
SATA disk	One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
ThinkLight™	None			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			NFC	<i>Optional:</i> Near Field Communication
Weight ²	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	Security	Power-on password, hard disk password, supervisor password, security keyhole
	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	Security chip	Trusted Platform Module, TCG 1.2-compliant
	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
				Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
Case material	Glass-Fiber Reinforced Plastic			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit
Battery - type	Li-Ion 6-cell (<i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication				<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit
Battery - life ¹⁰	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>		<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
	<i>Integrated</i>	7 hr	12.5 hr		
	<i>Optimus</i>	6.2 hr	11 hr		
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	

See footnotes for more detailed information

ThinkPad T540p 20BF

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Ex-press card	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BF005UUS	i5-4300M	4GBx1	15.6" HD	HD 4600	720p	500G 7200	None	7260 a/b/g/n	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8.1	1-Depot	Yes	04/14
20BF005SUS	i7-4600M	8GBx1	15.6" FHD	HD 4600	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	Yes	6	65W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset									
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)									
Optical	DVD burner, 9.5mm Ultrabay slim, removable			Smart Card Read	<i>Optional:</i> Smart Card reader									
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector									
M.2 SSD	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS			WWAN	<i>upg:</i> Wireless WAN upgradable									
Camera <i>(optional)</i>	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			<i>(optional)</i>	EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			SIM card	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider									
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight			<i>(optional)</i>	User selectable, contract required with service provider									
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									
ThinkLight™	None			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)									
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			NFC	<i>Optional:</i> Near Field Communication									
Weight ²	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>5.31 lb / 2.41kg</td><td>5.65 lb / 2.56kg</td></tr><tr><td><i>Optimus</i></td><td>5.43 lb / 2.46kg</td><td>5.80 lb / 2.63kg</td></tr></table>	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg			Security	Power-on password, hard disk password, supervisor password, security keyhole
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg												
<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg												
Case material	Glass-Fiber Reinforced Plastic			Security chip	Trusted Platform Module, TCG 1.2-compliant									
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication			vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models									
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>7 hr</td><td>12.5 hr</td></tr><tr><td><i>Optimus</i></td><td>6.2 hr</td><td>11 hr</td></tr></table>	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	7 hr	12.5 hr	<i>Optimus</i>	6.2 hr	11 hr			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	7 hr	12.5 hr												
<i>Optimus</i>	6.2 hr	11 hr												
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit									
				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite									

See footnotes for more detailed information

ThinkPad T540p 20BF (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Express card	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BF001LUS	i5-4300M	4GBx1	15.6" FHD	Intel HD 4600	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	10/13
20BF001NUS	i5-4300M	4GBx1	15.6" HD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	10/13
20BF001PUS	i5-4300M	4GBx1	15.6" FHD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	10/13
20BF001RUS	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	10/13
20BF001TUS	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	10/13
20BF0021US	i7-4600M	8GBx1	15.6" FHD	Intel HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	10/13
20BF0022US	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	10/13
20BF002DUS	i7-4600M	4GBx1	15.6" HD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	Yes	10/13
20BF002GUS	i7-4600M	4GBx1	15.5" 3K	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	Yes	10/13
20BF002PUS	i5-4300M	4GBx1	15.6" HD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	Yes	10/13
20BF0030US	i5-4300M	4GBx1	15.6" FHD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	Yes	10/13
20BF0034US	i7-4600M	4GBx1	15.6" HD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	Yes	10/13
20BF0037US	i5-4300M	4GBx1	15.6" HD	Intel HD 4600	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	Yes	10/13
20BF001WUS	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	11/13
20BF001XUS	i7-4600M	8GBx1	15.6" FHD	Intel HD 4600	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Depot	No	11/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset									
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)									
Optical	DVD burner, 9.5mm Ultrabay slim, removable			Smart Card Read	<i>Optional:</i> Smart Card reader									
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector									
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider									
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									
ThinkLight™	None			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)									
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			NFC	<i>Optional:</i> Near Field Communication									
Weight ²	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>5.31 lb / 2.41kg</td><td>5.65 lb / 2.56kg</td></tr><tr><td><i>Optimus</i></td><td>5.43 lb / 2.46kg</td><td>5.80 lb / 2.63kg</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	Security	Power-on password, hard disk password, supervisor password, security keyhole
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg												
<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg												
Case material	Glass-Fiber Reinforced Plastic			Security chip	Trusted Platform Module, TCG 1.2-compliant									
Battery - type	Li-Ion 6-cell (<i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication			vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models									
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>7 hr</td><td>12.5 hr</td></tr><tr><td><i>Optimus</i></td><td>6.2 hr</td><td>11 hr</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	7 hr	12.5 hr	<i>Optimus</i>	6.2 hr	11 hr	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	7 hr	12.5 hr												
<i>Optimus</i>	6.2 hr	11 hr												
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit									
				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite									

See footnotes for more detailed information

ThinkPad T540p 20BF (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Ex-press card	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BF005RUS	i7-4600M	8GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	No	9	90W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14
20BF005TUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	No	9	90W	Win7 P64 DG Win8.1	3-Depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)
				Smart Card Read	<i>Optional:</i> Smart Card reader
Optical Ultrabay	DVD burner, 9.5mm Ultrabay slim, removable			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
SATA disk	One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
ThinkLight™	None			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			NFC	<i>Optional:</i> Near Field Communication
Weight ²	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	Security	Power-on password, hard disk password, supervisor password, security keyhole
	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	Security chip	Trusted Platform Module, TCG 1.2-compliant
	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
				Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
Case material	Glass-Fiber Reinforced Plastic			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication				<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit
Battery - life ¹⁰	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>		<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
	<i>Integrated</i>	7 hr	12.5 hr		
	<i>Optimus</i>	6.2 hr	11 hr		
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite

See footnotes for more detailed information

ThinkPad T540p 20BF (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Express card	Battery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BF0018US	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	10/13
20BF001AUS	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	10/13
20BF001DUS	i7-4600M	4GBx1	15.5" 3K	GT 730M	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	10/13
20BF001EUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	10/13
20BF001GUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	10/13
20BF0024US	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	10/13
20BF002FUS	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF002HUS	i5-4300M	4GBx1	15.5" 3K	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF002KUS	i7-4600M	8GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF002LUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF002MUS	i7-4600M	8GBx1	15.5" 3K	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF002QUS	i5-4300M	4GBx1	15.6" HD	GT 730M	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF002VUS	i5-4300M	4GBx1	15.6" HD	GT 730M	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF002XUS	i7-4600M	4GBx1	15.5" 3K	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF0033US	i5-4300M	4GBx1	15.6" HD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	Yes	10/13
20BF0015US	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	11/13
20BF0017US	i7-4600M	4GBx1	15.5" 3K	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	11/13
20BF001KUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Depot	No	11/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)
				Smart Card Read	<i>Optional:</i> Smart Card reader
Optical	DVD burner, 9.5mm Ultrabay slim, removable			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high				
	<i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS				
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card
	<i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio				<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card
	<i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS				<i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				<i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
ThinkLight™	None			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
Weight ²	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	NFC	<i>Optional:</i> Near Field Communication
	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	Security	Power-on password, hard disk password, supervisor password, security keyhole
	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	Security chip	Trusted Platform Module, TCG 1.2-compliant
				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
Case material	Glass-Fiber Reinforced Plastic			Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit
Battery - life ¹⁰	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>		<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit
	<i>Integrated</i>	7 hr	12.5 hr		<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
	<i>Optimus</i>	6.2 hr	11 hr		
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite

See footnotes for more detailed information

ThinkPad T540p 20BF (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Express card	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BF0014US	i5-4300M	4GBx1	15.6" HD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	10/13
20BF001MUS	i5-4300M	4GBx1	15.6" FHD	Intel HD 4600	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	10/13
20BF001QUS	i5-4300M	4GBx1	15.6" FHD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	10/13
20BF001SUS	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	10/13
20BF001UUS	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	10/13
20BF0020US	i7-4600M	8GBx1	15.6" FHD	Intel HD 4600	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	10/13
20BF0023US	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	10/13
20BF002BUS	i5-4300M	4GBx1	15.6" HD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	Yes	10/13
20BF002EUS	i5-4300M	4GBx1	15.6" FHD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	Yes	10/13
20BF002TUS	i7-4600M	4GBx1	15.6" HD	Intel HD 4600	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	Yes	10/13
20BF002WUS	i5-4300M	4GBx1	15.6" HD	Intel HD 4600	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	Yes	10/13
20BF002YUS	i7-4600M	4GBx1	15.6" HD	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	Yes	10/13
20BF0036US	i7-4600M	4GBx1	15.5" 3K	Intel HD 4600	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	Yes	10/13
20BF001VUS	i7-4600M	4GBx1	15.6" FHD	Intel HD 4600	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	11/13
20BF001YUS	i7-4600M	8GBx1	15.6" FHD	Intel HD 4600	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	6	65W	Win8 P64	3-Onsite	No	11/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)
				Smart Card Read	<i>Optional:</i> Smart Card reader
Optical Ultrabay	DVD burner, 9.5mm Ultrabay slim, removable			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
SATA disk	One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
ThinkLight™	None			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			NFC	<i>Optional:</i> Near Field Communication
Weight ²	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	Security	Power-on password, hard disk password, supervisor password, security keyhole
	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	Security chip	Trusted Platform Module, TCG 1.2-compliant
	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
				Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
Case material	Glass-Fiber Reinforced Plastic			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication				<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit
Battery - life ¹⁰	<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>		<i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
	<i>Integrated</i>	7 hr	12.5 hr		
	<i>Optimus</i>	6.2 hr	11 hr		
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	

See footnotes for more detailed information

ThinkPad T540p 20BF (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Smart Card Reader	Express card	Bat-tery cells	Power Adapter (watt)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BF0019US	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	10/13
20BF001BUS	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	10/13
20BF001CUS	i7-4600M	4GBx1	15.5" 3K	GT 730M	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	10/13
20BF001FUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	10/13
20BF001HUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	10/13
20BF0025US	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	10/13
20BF002CUS	i5-4300M	4GBx1	15.6" HD	GT 730M	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF002JUS	i5-4300M	4GBx1	15.6" HD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF002NUS	i7-4600M	4GBx1	15.5" 3K	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF002RUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF002SUS	i7-4600M	8GBx1	15.5" 3K	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF002UUS	i5-4300M	4GBx1	15.6" HD	GT 730M	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF0031US	i7-4600M	8GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF0032US	i5-4300M	4GBx1	15.5" 3K	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF0035US	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	Yes	10/13
20BF0016US	i7-4600M	4GBx1	15.6" FHD	GT 730M	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	11/13
20BF001JUS	i5-4300M	4GBx1	15.6" FHD	GT 730M	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	Yes	9	90W	Win8 P64	3-Onsite	No	11/13

• For detailed platform specifications, please see [ThinkPad T540p Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor			Chipset	Mobile Intel QM87 Express Chipset									
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			ExpressCard	<i>Optional:</i> One slot (ExpressCard/34)									
Optical	DVD burner, 9.5mm Ultrabay slim, removable			Smart Card Read	<i>Optional:</i> Smart Card reader									
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high			Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS			Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort, ethernet (RJ-45), Dock connector									
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack									
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) , 220 nits, 400:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS			WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
Graphics	Intel HD Graphics 4600 in processor, or Intel HD Graphics 4600 and NVIDIA GeForce® GT 730M , 1GB memory (Optimus)			SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider									
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch			Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									
ThinkLight™	None			Ethernet	Intel Ethernet Connection I217-LM (Clarkville)									
Dimensions ³	<i>HD (WxDxH):</i> 14.83" x 9.77" x 1.18-1.33"; 376.6mm x 248.1mm x 29.9-33.9mm <i>FHD / 3K:</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm			NFC	<i>Optional:</i> Near Field Communication									
Weight ²	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>5.31 lb / 2.41kg</td><td>5.65 lb / 2.56kg</td></tr><tr><td><i>Optimus</i></td><td>5.43 lb / 2.46kg</td><td>5.80 lb / 2.63kg</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg	<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg	Security	Power-on password, hard disk password, supervisor password, security keyhole
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	5.31 lb / 2.41kg	5.65 lb / 2.56kg												
<i>Optimus</i>	5.43 lb / 2.46kg	5.80 lb / 2.63kg												
Case material	Glass-Fiber Reinforced Plastic			Security chip	Trusted Platform Module, TCG 1.2-compliant									
Battery - type	Li-Ion 6-cell (<i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication			vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models									
Battery - life ¹⁰	<table><tr><td><i>Models</i></td><td><i>6-cell</i></td><td><i>9-cell</i></td></tr><tr><td><i>Integrated</i></td><td>7 hr</td><td>12.5 hr</td></tr><tr><td><i>Optimus</i></td><td>6.2 hr</td><td>11 hr</td></tr></table>			<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>	<i>Integrated</i>	7 hr	12.5 hr	<i>Optimus</i>	6.2 hr	11 hr	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
<i>Models</i>	<i>6-cell</i>	<i>9-cell</i>												
<i>Integrated</i>	7 hr	12.5 hr												
<i>Optimus</i>	6.2 hr	11 hr												
AC adapter	60-watt, 90-watt, or 135-watt AC adapter			Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit									
				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite									

See footnotes for more detailed information



Lenovo® ThinkPad W530



Lenovo ThinkPad W530



Lenovo ThinkPad W530



Lenovo ThinkPad W530



Lenovo ThinkPad W530 with
four displays



Lenovo ThinkPad W530

ThinkPad W530 2438 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ² rpm	RAID	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Smart Card Reader	Color calib	Battery Intel cells vPro	Preload	Ann Date (mm/yy)
2438-2MU	i7-3920XM	4GBx4	15.6" FHD	K2000M	1x500G 7200	No	None	Intel 6205 ²⁸	WWAN upg	Smart	X-Rite	9 vPro	Pro 64	06/12
2438-2LU	i7-3720QM	4GBx1	15.6" FHD	K2000M	1x500G 7200	No	None	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	06/12
2438-2KU	i7-3820QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	None	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	06/12
2438-2JU	i7-3720QM	4GBx1	15.6" HD+	K1000M	1x500G 7200	No	None	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	06/12
2438-2HU	i7-3720QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	None	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	06/12
2438-3AU	i7-3720QM	8GBx1	15.6" FHD	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	07/12
2438-39U	i7-3720QM	8GBx1	15.6" HD+	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	07/12
2438-59U	i7-3840QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	None	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	02/13
2438-58U	i7-3940XM	4GBx4	15.6" FHD	K2000M	1x500G 7200	No	None	Intel 6205	WWAN upg	Smart	X-Rite	9 vPro	Pro 64	02/13
2438-57U	i7-3740QM	4GBx1	15.6" FHD	K2000M	1x500G 7200	No	None	Intel 6205	WWAN upg	None	None	9 vPro	Pro 64	02/13
Positioning Processor	<i>Mobile workstation; two spindles</i> Intel® Core™ i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3820QM processor (4 cores, 2.70GHz, 8MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3840QM processor (4 cores, 2.80GHz, 8MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology Intel Core i7-3920XM processor (4 cores, 2.90GHz, 8MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology Intel Core i7-3940XM processor (4 cores, 3.0GHz, 8MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.90GHz), HT technology										Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • X-Rite® Pantone® Color Calibrator (color calibration models)			
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-12800 1600MHz DDR3, non-parity, dual-channel capable													
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive													
mSATA™ SSD	None													
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut													
Color calibration Camera	<i>Some:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA Quadro® K1000M or K2000M , PCI Express® x16, 2GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 3840x2160@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)													
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>15.6W" (WxDxH):</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.76 lb (2.62kg); <i>9-cell:</i> starting at 6.19 lb (2.81kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic w/o paint Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr													
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)													
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Security Security chip Fingerprint reader														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available													

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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ThinkPad W530 2438 (Optimus) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ⁵ rpm	RAID	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2438-4CU	i7-3720QM	8GBx1	15.6" FHD	K1000M	1x500G 7200	No	Backlit	Intel 6205 ²⁸	WWAN upg	None	9	iAMT vPro	Win7 Pro64	10/12
2438-4BU	i7-3720QM	8GBx1	15.6" HD+	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win7 Pro64	10/12
2438-3BU	i7-3720QM	8GBx1	15.6" FHD	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win8 Pro64	10/12
2438-38U	i7-3720QM	8GBx1	15.6" HD+	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win8 Pro64	10/12
2438-4LU	i7-3720QM	8GBx1	15.6" FHD	K1000M	1x180G SSD	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win7 Pro64	10/12
2438-4KU	i7-3630QM	8GBx1	15.6" HD+	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	9	None	Win7 Pro64	10/12
2438-5AU	i7-3740QM	8GBx1	15.6" HD+	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win7 Pro64	02/13
2438-56U	i7-3740QM	8GBx1	15.6" FHD	K1000M	1x180G SSD	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win7 Pro64	02/13
2438-52U	i7-3740QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win7 Pro64	02/13
2438-4ZU	i7-3740QM	4GBx2	15.6" FHD	K1000M	1x180G SSD	No	Backlit	Intel 6205	WWAN upg	None	9	iAMT vPro	Win7 Pro64	02/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**
- **Power-packed engineering with Open GL graphics and ISV certifications**

Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-3630QM processor (4 cores, 2.40GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none"> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none"> • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™ 				
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-12800 1600MHz DDR3, non-parity, dual-channel capable														
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration	None														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA Quadro® K1000M or K2000M , PCI Express® x16, 2GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; Maximum external resolution: 3840x2160@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)														
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ²	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm 6-cell: starting at 5.76 lb (2.62kg); 9-cell: starting at 6.19 lb (2.81kg)														
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint														
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication														
Battery - life ¹⁰	6-cell (57Whr): up to 7.7 hr; 9-cell (94Whr): up to 12.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 25.6 hr														
Chipset	Mobile Intel QM77 Express Chipset														
ExpressCard	One slot (ExpressCard/34)														
Smart Card Read	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card	Two PCI Express Mini Card slots														
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2														
PCIe WWAN	Wireless WAN upgradable														
Carrier	None														
Modem	None														
Bluetooth™	Bluetooth 4.0 wireless														
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1														
Intel AMT	Some: Intel Active Management Technology (iAMT)														
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole														
Security	Trusted Platform Module, TCG 1.2-compliant														
Security chip	Power On Authentication, supports the security chip														
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available														

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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ThinkPad W530 2438 (Optimus) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ⁵ rpm	RAID	Backlit key-board	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Power Adapter (watt)	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
2438-5JU	i7-3740QM	8GBx1	15.6" FHD	K2000M	1x500G 7200	No	Backlit	Smart	Finger	X-Rite	9	135W	iAMT	vPro	Win8 Pro64	03/13
2438-5HU	i7-3740QM	8GBx1	15.6" FHD	K2000M	1x500G 7200	No	Backlit	Smart	Finger	X-Rite	9	135W	iAMT	vPro	Win7 Pro64	03/13
2438-5GU	i7-3740QM	8GBx1	15.6" HD+	K2000M	1x500G 7200	No	Backlit	Smart	Finger	X-Rite	9	135W	iAMT	vPro	Win7 Pro64	03/13
2438-5FU	i7-3630QM	8GBx1	15.6" HD+	K2000M	1x500G 7200	No	Backlit	Smart	Finger	X-Rite	9	135W	None	No	Win8 Pro64	03/13
2438-5EU	i7-3630QM	8GBx1	15.6" FHD	K2000M	1x500G 7200	No	Backlit	Smart	Finger	X-Rite	9	135W	None	No	Win8 Pro64	03/13
2438-5DU	i7-3630QM	8GBx1	15.6" FHD	K2000M	1x500G 7200	No	Backlit	Smart	Finger	X-Rite	9	135W	None	No	Win7 Pro64	03/13
2438-5CU	i7-3630QM	8GBx1	15.6" HD+	K2000M	1x500G 7200	No	Backlit	Smart	Finger	X-Rite	9	135W	None	No	Win7 Pro64	03/13
2438-62U	i7-3740QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	Backlit	None	None	None	9	170W	iAMT	vPro	Win7 Pro64	07/13
2438-5ZU	i7-3740QM	4GBx2	15.6" FHD	K1000M	1x256G SSD OPAL	No	Backlit	None	None	None	9	170W	iAMT	vPro	Win7 Pro64	07/13
2438-5YU	i7-3630QM	4GBx2	15.6" HD+	K1000M	1x256G SSD OPAL	No	Backlit	None	None	None	9	170W	None	No	Win7 Pro64	07/13
2438-5XU	i7-3630QM	4GBx2	15.6" HD+	K1000M	1x500G 7200	No	Backlit	None	None	None	9	170W	None	No	Win7 Pro64	07/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**
- **Power-packed engineering with Open GL graphics and ISV certifications**

Positioning Processor	<i>Mobile workstation; two spindles</i> Intel® Core™ i7-3630QM processor (4 cores, 2.40GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models <ul style="list-style-type: none">• Lenovo® Message Center Plus• ThinkVantage Product Recovery• Access Connections™• ThinkVantage Power Manager• Lenovo SimpleTap• Adobe® Reader®• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo QuickLaunch• PC Device Stage• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">• Lenovo Solution Center• Password Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• Lenovo Cloud Storage by SugarSync• Microsoft® Office preloaded; purchase a product key to activate• Skype™
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-12800 1600MHz DDR3, non-parity, dual-channel capable		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut		
Color calibration Camera	<i>Some:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA Quadro® K1000M or K2000M , PCI Express® x16, 2GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 3840x2160 @60Hz (DisplayPort via optional Mini DP cable); 1920x1200 @60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536 @85Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	<i>15.6W" (WxDxH):</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.76 lb (2.62kg); <i>9-cell:</i> starting at 6.19 lb (2.81kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Security Security chip Fingerprint reader			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

ThinkPad W530 2441 (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ⁵ rpm	RAID	SATA optical	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat-tery cells	Global (G) Intel vPro	GMP (P) Preload	Ann Date (mm/yy)
2441-3TU	i7-3720QM	4GBx1	15.6" FHD	K1000M	2x500G 7200	1	None	None	Intel 6205 ²⁸	upg	Finger	9	vPro	G	Pro 64 06/12
2441-3SU	i7-3720QM	4GBx1	15.6" FHD	K1000M	2x500G 7200	0	None	None	Intel 6205	upg	Finger	9	vPro	G	Pro 64 06/12
2441-37U	i7-3720QM	4GBx1	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6300 ²⁸	upg	None	9	vPro	G	Pro 64 06/12
2441-36U	i7-3820QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6300	upg	Finger	9	vPro	G	Pro 64 06/12
2441-23U	i7-3820QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	DVD±RW	None	Intel 6205	upg	Finger	9	vPro	G	Pro 64 06/12
2441-22U	i7-3720QM	4GBx1	15.6" HD+	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	upg	Finger	9	vPro	G	Pro 64 06/12
2441-5RU	i7-3740QM	4GBx1	15.6" HD+	K1000M	1x320G 7200	No	DVD±RW	None	Intel 6205	upg	Finger	9	vPro	G	Pro 64 02/13
2441-5QU	i7-3840QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	upg	Finger	9	vPro	G	Pro 64 02/13
2441-5PU	i7-3740QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6300	upg	None	9	vPro	G	Pro 64 02/13
Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3820QM processor (4 cores, 2.70GHz, 8MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3840QM processor (4 cores, 2.80GHz, 8MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology											Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • X-Rite® Pantone® Color Calibrator (color calibration models)			
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-12800 1600MHz DDR3, non-parity, dual-channel capable														
Optical Ultrabay SATA disk	Some: DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) Full HD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration	None														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA Quadro® K1000M or K2000M, PCI Express® x16, 2GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; Maximum external resolution: 3840x2160@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)														
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm 6-cell: starting at 5.76 lb (2.62kg); 9-cell: starting at 6.19 lb (2.81kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 7.7 hr; 9-cell (94Whr): up to 12.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 25.6 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)											Supports ThinkVantage® technologies			
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3											170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack														
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip											For compatible accessories, please go to O-W530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet; For ISV certifications, please visit www.lenovo.com/support/ISV			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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 (KN4W-2) February 2013

ThinkPad W530 2441 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ^o rpm	RAID	SATA optical	Backlit key-board	PCIe Mini Card WLAN	Color calib	Bat-tery cells	Global (G) Intel vPro (P)	Preload	Ann Date (mm/yy)
2441-45U	i7-3820QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205 ²⁸	X-Rite	9	vPro	G	Win8 Pro64 10/12
2441-46U	i7-3720QM	4GBx1	15.6" HD+	K1000M	1x500G 7200	No	DVD±RW	None	Intel 6205	X-Rite	9	vPro	G	Win8 Pro64 10/12
2441-5SU	i7-3740QM	4GBx2	15.6" FHD	K1000M	1x180G SSD	No	DVD±RW	Backlit	Intel 6205	None	9	vPro		Win7 Pro64 02/13
2441-5EU	i7-3740QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	DVD±RW	Backlit	Intel 6205	None	9	vPro		Win7 Pro64 02/13
2441-5DU	i7-3840QM	4GBx2	15.6" FHD	K1000M	1x240G FDE SSD	No	DVD±RW	Backlit	Intel 6205	None	9	vPro		Win7 Pro64 02/13
2441-5CU	i7-3740QM	4GBx2	15.6" HD+	K1000M	2x500G 7200	1	None	Backlit	Intel 6205	None	9	vPro		Win7 Pro64 02/13
2441-5BU	i7-3740QM	4GBx2	15.6" HD+	K1000M	2x500G 7200	0	None	Backlit	Intel 6205	None	9	vPro		Win7 Pro64 02/13

- A depot repair service 3-year limited warranty
- Power-packed engineering with Open GL graphics and ISV certifications

Positioning Processor	<i>Mobile workstation; two spindles</i> Intel® Core™ i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3820QM processor (4 cores, 2.70GHz, 8MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3840QM processor (4 cores, 2.80GHz, 8MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology		Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™	
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-12800 1600MHz DDR3, non-parity, dual-channel capable			
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut			
Color calibration Camera	<i>Some:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA Quadro® K1000M or K2000M , PCI Express® x16, 2GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution:</i> 3840x2160@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>6-cell:</i> starting at 5.76 lb (2.62kg); <i>9-cell:</i> starting at 6.19 lb (2.81kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr; <i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant		Supports ThinkVantage® technologies 170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Security Security chip Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-W530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet; For ISV certifications, please visit www.lenovo.com/support/ISV	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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ThinkPad W530 2447 (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ⁸ rpm	RAID	SATA optical	Backlit key-board	PCIe Mini Card WLAN	Finger print reader	Color calib	Bat-tery cells	Global (G) vPro	GMP (P)	Pre-load	Ann Date (mm/yy)
2447-3TU	i7-3720QM	4GBx1	15.6" FHD	K1000M	2x500G 7200	1	None	None	Intel 6205 ²⁸	Finger	None	9	vPro	G P	Pro 64	06/12
2447-3SU	i7-3720QM	4GBx1	15.6" FHD	K1000M	2x500G 7200	0	None	None	Intel 6205	Finger	None	9	vPro	G P	Pro 64	06/12
2447-2TU	i7-3720QM	4GBx1	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6300 ²⁸	None	X-Rite	9	vPro		Pro 64	06/12
2447-2SU	i7-3820QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6300	Finger	None	9	vPro		Pro 64	06/12
2447-23U	i7-3820QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	Finger	None	9	vPro	G P	Pro 64	06/12
2447-22U	i7-3720QM	4GBx1	15.6" HD+	K1000M	1x320G 7200	No	DVD±RW	None	Intel 6205	Finger	None	9	vPro	G P	Pro 64	06/12
2447-52U	i7-3840QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	Finger	None	9	vPro		Pro 64	02/13

- Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- Power-packed engineering with Open GL graphics and ISV certifications

Positioning Processor	<p><i>Mobile workstation; two spindles</i></p> <p>Intel® Core™ i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology</p> <p>Intel Core i7-3820QM processor (4 cores, 2.70GHz, 8MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology</p> <p>Intel Core i7-3840QM processor (4 cores, 2.80GHz, 8MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology</p>										<p>Preloaded operating system²⁰</p> <p>Genuine Windows® 7 Professional 64</p> <p>Ready to install applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Rescue and Recovery™ • Password Manager <p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • RapidBoot HDD Accelerator • Symantec™ VIP • Windows Live™ Essentials • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • X-Rite® Pantone® Color Calibrator (color calibration models) 						
Memory	<p><i>dual-core model:</i> 16GB max⁷, two 204-pin SO-DIMM sockets</p> <p><i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets</p> <p><i>All:</i> PC3-12800 1600MHz DDR3, non-parity, dual-channel capable</p>																
Optical Ultrabay SATA disk	<p><i>Some:</i> DVD burner, 12.7mm Ultrabay Enhanced, removable</p> <p><i>One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access</i></p> <p><i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high</p> <p><i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™</p> <p><i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive</p>																
mSATA™ SSD	None																
Widescreen display	<p><i>Some:</i> 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut</p> <p><i>Some:</i> 15.6" (396mm) Full HD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut</p>																
Color calibration Camera	<p><i>Some:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator</p> <p>HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus</p>																
Graphics	<p>NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA Quadro® K1000M or K2000M, PCI Express® x16, 2GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays;</p> <p><i>Maximum external resolution:</i> 3840x2160 @60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)</p>																
Keyboard TrackPoint® Touchpad ThinkLight™	<p>6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight</p> <p>TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar¹³, magnifying glass</p> <p>UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch</p> <p>Illuminates the keyboard to improve visibility in low-light conditions</p>																
Dimensions ³ Weight ² Case material	<p><i>15.6W" (WxDxH):</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm</p> <p><i>6-cell:</i> starting at 5.76 lb (2.62kg); <i>9-cell:</i> starting at 6.19 lb (2.81kg)</p> <p><i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid;</p> <p><i>Bottom:</i> Glass-fiber reinforced plastic without paint</p>																
Battery - type Battery - life ¹⁰	<p>Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication</p> <p><i>6-cell (57Whr):</i> up to 7.7 hr; <i>9-cell (94Whr):</i> up to 12.8 hr;</p> <p><i>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</i> up to 25.6 hr</p>																
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<p>Mobile Intel QM77 Express Chipset</p> <p>One slot (ExpressCard/34)</p> <p>None</p> <p>4-in-1 reader (MMC, SD, SDHC, SDXC)</p> <p>Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</p>																
PCIe Mini Card PCIe WLAN ⁴	<p>Two PCI Express Mini Card slots</p> <p><i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2</p> <p><i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3</p>																
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<p>Wireless WAN upgradable</p> <p>None</p> <p>None</p> <p>Bluetooth 4.0 wireless</p> <p>Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1</p> <p>Intel Active Management Technology (iAMT)</p> <p>HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack</p>																
Security Security chip Fingerprint reader	<p>Power-on password, hard disk password, supervisor password, security keyhole</p> <p>Trusted Platform Module, TCG 1.2-compliant</p> <p><i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip</p>																
Limited warranty ¹²	<p>3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades²² available</p>										<p>Supports ThinkVantage® technologies</p> <p>170-watt AC adapter</p> <p>ThinkPad Roll Cage (one-piece magnesium frame)</p> <p>EPEAT™ Gold rating</p> <p>ENERGY STAR® 5.0-compliant</p> <p>GREENGUARD® certified</p> <p>RoHS-compliant</p> <p>International Warranty Service¹⁷</p> <p>24 hour x 7 day¹⁸ toll-free support during the warranty period¹²</p> <p>For compatible accessories, please go to O-W530 sheet;</p> <p>For Lenovo service²² upgrade options, please go to S-TA sheet;</p> <p>For ISV certifications, please visit www.lenovo.com/support/ISV</p>						

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(KN4W-3) February 2013

ThinkPad W530 2447 (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ² rpm	RAID	SATA optical	Backlit key-board	PCIe Mini Card WLAN	Color calib	Bat-tery cells	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
2447-45U	i7-3720QM	4GBx1	15.6" HD+	K1000M	1x500G 7200	No	DVD±RW	None	Intel 6205 ²⁸	X-Rite	9	vPro	G P	Win8 Pro64	10/12
2447-46U	i7-3820QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	X-Rite	9	vPro	G P	Win8 Pro64	10/12
2447-4ZU	i7-3740QM	4GBx2	15.6" FHD	K1000M	1x500G 7200	No	DVD±RW	Backlit	Intel 6205	None	9	vPro		Win7 Pro64	02/13
2447-4YU	i7-3840QM	4GBx2	15.6" FHD	K1000M	1x240G FDE SSD	No	DVD±RW	Backlit	Intel 6205	None	9	vPro		Win7 Pro64	02/13
2447-4XU	i7-3740QM	4GBx2	15.6" HD+	K1000M	2x500G 7200	1	None	Backlit	Intel 6205	None	9	vPro		Win7 Pro64	02/13
2447-4WU	i7-3740QM	4GBx2	15.6" HD+	K1000M	2x500G 7200	0	None	Backlit	Intel 6205	None	9	vPro		Win7 Pro64	02/13
2447-5KU	i7-3840QM	4GBx1	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	X-Rite	9	vPro	G P	Win8 Pro64	05/13
2447-5JU	i7-3840QM	4GBx1	15.6" FHD	K1000M	1x500G 7200	No	DVD±RW	None	Intel 6205	X-Rite	9	vPro	G P	Win8 Pro64	05/13
2447-5HU	i7-3840QM	4GBx2	15.6" FHD	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	X-Rite	9	vPro	G P	Win8 Pro64	05/13
2447-5GU	i7-3840QM	4GBx2	15.6" HD+	K2000M	1x500G 7200	No	DVD±RW	None	Intel 6205	X-Rite	9	vPro	G P	Win8 Pro64	05/13
2447-5FU	i7-3740QM	4GBx1	15.6" HD+	K1000M	1x500G 7200	No	DVD±RW	None	Intel 6205	X-Rite	9	vPro	G P	Win8 Pro64	05/13
Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3820QM processor (4 cores, 2.70GHz, 8MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology Intel Core i7-3840QM processor (4 cores, 2.80GHz, 8MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™				
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-12800 1600MHz DDR3, non-parity, dual-channel capable														
Optical Ultrabay SATA disk	Some: DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) Full HD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration Camera	Some: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA Quadro® K1000M or K2000M, PCI Express® x16, 2GB memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; Maximum external resolution: 3840x2160@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@85Hz (VGA)														
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material	15.6W" (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm 6-cell: starting at 5.76 lb (2.62kg); 9-cell: starting at 6.19 lb (2.81kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication 6-cell (57Whr): up to 7.7 hr; 9-cell (94Whr): up to 12.8 hr; 9-cell plus 9-cell Slice battery (94Whr, 0A36304): up to 25.6 hr														
Chipset ExpressCard Smart Card Reader Multicard Reader Ports	Mobile Intel QM77 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, two USB 2.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole														
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available										Supports ThinkVantage® technologies 170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-W530 sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet; For ISV certifications, please visit www.lenovo.com/support/ISV				

See footnotes for more detailed information
 US model(s) withdrawn effective March 2013

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 (KN4W-6) May 2013

ThinkPad W530 Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann 06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann 06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann 06/05/12

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive 12.7mm Bay Adapter III	0A65623	ann 02/28/12
DVD Burner Ultrabay Enhanced Drive III	0A65625	ann 06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann 12/11/12
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65631	ann 06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65632	ann 06/05/12
1TB 5400rpm SATA 3.0Gb/s 9.5mm 4K HDD ⁴¹	0A65633	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65635	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm		
Self Encrypting (SED) OPAL Capable HDD ⁴¹	0A65636	ann 08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65629	ann 06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65630	ann 06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD ⁴¹	0A65620	ann 05/15/12

⁴¹ Can be used as the main HDD or with
Serial ATA Hard Drive 12.7mm Bay Adapter III 0A65623 in the Ultrabay.

USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models: ThinkPad Gobi™ 3000 Mobile Broadband	0A36185	ann 04/12/11
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ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann 06/05/12

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann 06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann 01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

3M 15.6W Privacy Filter from Lenovo	0A61771	ann 04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

Batteries

ThinkPad Battery 70+ (6-cell)	0A36302	ann 06/05/12
ThinkPad Battery 70++ (9-cell)	0A36303	ann 06/05/12
ThinkPad Battery 28++ (9 cell, slice) ⁴³	0A36304	ann 06/05/12

⁴³ To be used along with system battery for all-day computing;
attaches under ThinkPad using docking connector (not supported when using ThinkPad Mini Dock Plus Series 3 w/ USB 3.0 - 170W 433835U)

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05
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⁴⁴ Requires the ThinkPad 90W AC Adapter
40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 170W AC Adapter for W520, W530	0A36227	ann 03/01/11
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More info at www.lenovo.com/support/poweradapters

Carrying Cases

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08
Lenovo Sport Backpack - Red	0A33896	ann 02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann 02/28/12
Lenovo Sport Messenger - Red	0A33898	ann 02/28/12
Lenovo Sport Backpack - Blue	0B47298	ann 08/28/12
Lenovo Sport Slimcase - Blue	0B47300	ann 08/28/12
Lenovo Sport Messenger - Blue	0B47299	ann 08/28/12
Lenovo Sport Backpack - Grey	0B47301	ann 08/28/12
Lenovo Sport Slimcase - Grey	0B47303	ann 08/28/12
Lenovo Sport Messenger - Grey	0B47302	ann 08/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09

⁶⁹ DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann 08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann 08/16/11

More information at www.lenovo.com/support/monitors
www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann 08/14/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann 05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann 06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann 07/24/12
Lenovo USB Soundbar	0A36190	ann 05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad W540



Lenovo ThinkPad W540



Lenovo ThinkPad W540



Lenovo ThinkPad W540



Lenovo ThinkPad W540

ThinkPad W540 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Mobile workstation; two spindles									Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack	
Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor									WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none">ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 CardIntel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 CardIntel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 CardIntel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card	
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology	WWAN (optional)	One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none">Wireless WAN upgradableWireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card	
	i5-4200M	2	4	2.5 GHz	3.1 GHz	3MB	DDR3L-1600	Intel HD Graphics 4600	No	SIM card (optional)	One of the following, configurable by model: <ul style="list-style-type: none">AT&T® or Verizon® LTE (4G), contract required with service providerUser selectable, contract required with service provider	
	i5-4330M			2.8 GHz	3.5 GHz	3MB			Yes			
	i7-4600M			2.9 GHz	3.6 GHz	4MB			Yes			
	i7-4700MQ	4	8	2.4 GHz	3.4 GHz	6MB			No			
	i7-4800MQ			2.7 GHz	3.7 GHz	6MB			Yes			
	i7-4900MQ			2.8 GHz	3.8 GHz	8MB			Yes			
	i7-4930MX			3 GHz	3.9 GHz	8MB			Yes			
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable									Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) Optional: Near Field Communication	
Optical Ultrabay	Some: DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high, bottom access									Security chip vPro & iAMT	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models	
SATA disk	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive (HDD) / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Some: M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card									Fingerprint reader	Optional: Fingerprint reader on the palm rest, swipe sensor	
M.2 SSD										Limited warranty ¹²	One of the following, configurable by model: <ul style="list-style-type: none">1-year - depot repair service / service upgrades²² available3-years/1-yr battery - depot repair service / service upgrades available3-years/1-yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available For Lenovo service upgrade options, please go to S-TA sheet	
Widescreen display	Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.5" (394mm) 3K (2880x1620) color, anti-glare, LED backlight, 350 nits, 16:9 aspect ratio, 1000:1 contrast ratio, IPS									Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">Lenovo Solution CenterThinkVantage Product RecoveryRescue and Recovery™ThinkVantage System UpdateLenovo Cloud Storage by SugarSyncPC Device StageAdobe® Reader®Nitro ProEvernote®Skype™Microsoft® Office preloaded; purchase a product key to activateNorton™ Internet Security (30 days of virus definitions)Cyberlink PowerDVD (DVD±RW)Cyberlink Power2Go (DVD±RW)Cyberlink PowerProducer (DVD±RW) Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">Lenovo Solution CenterLenovo SupportLenovo CompanionThinkVantage System UpdateLenovo Reach (Window 8.1 model)Hightail - Metro (Window 8.1 model)Lenovo Cloud Storage by SugarSync - Metro (Window 8 model)Lenovo Cloud Storage by SugarSync (Window 8 model)PC Device StageAccuWeatherAmazon KindleNitro ProEvernoteSkypeRara StreamingNorton StudioMicrosoft Office preloaded; purchase a product key to activateNorton Internet Security (30 days of virus definitions)Cyberlink PowerDVD (DVD±RW)Cyberlink Power2Go (DVD±RW)Cyberlink PowerProducer (DVD±RW)	
MultiTouch	None									For ISV certifications, please visit www.lenovo.com/support/ISV		
Color calibration	Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator											
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus											
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M, PCI Express® x16, 2GB memory, supports external analog monitor via VGA and digital monitor via Mini DisplayPort / Thunderbolt™; supports three independent displays; Max external resolution: 3840x2160@60Hz (DisplayPort via Mini DP cable); 3840x2160@60Hz (Thunderbolt); 1920x1200@60Hz (VGA)											
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch											
ThinkLight™	None											
Dimensions ³	15.6W" (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm											
Weight ²	6-cell: starting at 5.57 lb (2.53kg); 9-cell: starting at 5.95 lb (2.70kg)											
Case material	Glass-Fiber Reinforced Plastic											
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication											
Battery - life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.1 hr											
AC adapter	dual-core: 135-watt AC adapter; quad-core: 170-watt AC adapter											
Chipset	Mobile Intel QM87 Express Chipset											
ExpressCard	One slot (ExpressCard/34)											
Smart Card Read	Optional: Smart Card reader											
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card											
Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, ethernet (RJ-45), Dock connector											
Environment	EPEAT™ Gold; ENERGY STAR® 5.0; GREENGUARD®; RoHS-compliant											

See footnotes for more detailed information

ThinkPad W540 20BG (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Discrete graphics	Cam-era	Storage	RAID	Optical	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Color calib	Smart Card Reader	Bat-tery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BG0013US	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x180G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0017US	i7-4800MQ	8GBx1	15.5" 3K	K2100M	720p	1x180G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	X-Rite	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0010US	i7-4700MQ	4GBx2	15.6" FHD	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0011US	i7-4700MQ	4GBx2	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0012US	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0014US	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0015US	i7-4800MQ	4GBx2	15.6" FHD	K2100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG001YUS	i7-4700MQ	8GBx1	15.6" FHD	K1100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0020US	i7-4800MQ	8GBx1	15.6" FHD	K1100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0021US	i7-4800MQ	8GBx1	15.6" FHD	K2100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0022US	i7-4800MQ	8GBx1	15.5" 3K	K1100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win7 P64 DG Win8	3-Depot	No	11/13
20BG0016US	i7-4800MQ	8GBx1	15.5" 3K	K2100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	X-Rite	None	9	Win7 P64 DG Win8	3-Depot	No	11/13

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor	Chipset	Mobile Intel QM87 Express Chipset
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable	ExpressCard Smart Card Read Multicard Reader Ports	One slot (ExpressCard/34) <i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, ethernet (RJ-45), Dock connector
Optical	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high	WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card	WWAN (<i>optional</i>)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
M.2 SSD		SIM card (<i>optional</i>)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Widescreen display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
MultiTouch	None	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
Color calibration	<i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	NFC	<i>Optional:</i> Near Field Communication
Camera (<i>optional</i>)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Security	Power-on password, hard disk password, supervisor password, security keyhole
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M , PCI Express® x16, 2GB memory	Security chip	Trusted Platform Module, TCG 1.2-compliant
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
ThinkLight™	None	Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
Dimensions ³	<i>15.6W"</i> (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
Weight ²	<i>6-cell:</i> starting at 5.57 lb (2.53kg); <i>9-cell:</i> starting at 5.95 lb (2.70kg)		
Case material	Glass-Fiber Reinforced Plastic		
Battery - type	Li-Ion 6-cell (<i>56Wh</i>) or 9-cell (<i>99.9Wh</i>), HW Authentication		
Battery - life ¹⁰	<i>6-cell:</i> up to 6.2 hr; <i>9-cell:</i> up to 11.1 hr		
AC adapter	<i>dual-core:</i> 135-watt AC adapter; <i>quad-core:</i> 170-watt AC adapter		

See footnotes for more detailed information

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ThinkPad W540 20BH (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Discrete graphics	Camera	Storage	RAID	Optical	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Color calib	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BH0019US	i7-4800MQ	4GBx1	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH001BUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH001DUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x128G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH001VUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH002CUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x180G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	Yes	11/13
20BH001JUS	i7-4900MQ	4GBx2	15.6" FHD	K2100M	720p	1x500G 7200	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH001LUS	i7-4900MQ	4GBx2	15.6" FHD	K2100M	720p	1x128G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH001XUS	i7-4900MQ	4GBx2	15.6" FHD	K2100M	720p	1x256G SSD eDrive	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH001FUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	2x500G 7200	0	None	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH001GUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	2x500G 7200	1	None	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	No	11/13
20BH002DUS	i7-4800MQ	4GBx2	15.5" 3K	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	Yes	11/13
20BH002FUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	Yes	11/13
20BH002HUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	Yes	11/13
20BH002KUS	i7-4800MQ	4GBx2	15.6" FHD	K2100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	Yes	11/13
20BH002RUS	i7-4800MQ	8GBx1	15.6" FHD	K1100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	Yes	11/13
20BH002TUS	i7-4800MQ	8GBx1	15.5" 3K	K1100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Depot	Yes	11/13
20BH002PUS	i7-4800MQ	4GBx2	15.5" 3K	K2100M	720p	1x512G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	X-Rite	None	9	Win8 P64	3-Depot	Yes	11/13
20BH001PUS	i7-4900MQ	8GBx1	15.5" 3K	K2100M	720p	1x500G 5400	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	NFC	X-Rite	None	9	Win8 P64	3-Depot	No	01/14
20BH001TUS	i7-4900MQ	8GBx1	15.5" 3K	K2100M	720p	1x512G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	NFC	X-Rite	None	9	Win8 P64	3-Depot	No	01/14
20BH001UUS	i7-4900MQ	8GBx1	15.5" 3K	K2100M	720p	1x180G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	NFC	X-Rite	None	9	Win8 P64	3-Depot	No	01/14

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor	Chipset	Mobile Intel QM87 Express Chipset
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable	ExpressCard	One slot (ExpressCard/34)
Optical	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable	Smart Card Read	<i>Optional:</i> Smart Card reader
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high	Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS	Ports	Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, ethernet (RJ-45), Dock connector
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Widescreen display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS	WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
MultiTouch	None	WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Color calibration	<i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M , PCI Express® x16, 2GB memory	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight	NFC	<i>Optional:</i> Near Field Communication
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole
ThinkLight™	None	Security chip	Trusted Platform Module, TCG 1.2-compliant
Dimensions ³	<i>15.6W"</i> (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
Weight ²	<i>6-cell:</i> starting at 5.57 lb (2.53kg); <i>9-cell:</i> starting at 5.95 lb (2.70kg)	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
Case material	Glass-Fiber Reinforced Plastic	Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
Battery - life ¹⁰	<i>6-cell:</i> up to 6.2 hr; <i>9-cell:</i> up to 11.1 hr		
AC adapter	<i>dual-core:</i> 135-watt AC adapter; <i>quad-core:</i> 170-watt AC adapter		

See footnotes for more detailed information
US model(s) withdrawn effective January 2014

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ThinkPad W540 20BH (Optimus) - Windows 8 - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Discrete graphics	Camera	Storage	RAID	Optical	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Color calib	Smart Card Reader	Battery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BH004MUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	180G SSD	OPAL	No	DVD±RW	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	9	Win8 P64	3-Depot	Yes	04/14
20BH004NUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	500G 7200		No	DVD±RW	None	7260 a/b/g/n	upg	None	Finger	None	None	9	Win8 P64	3-Depot	Yes	04/14
20BH004QUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	128G SSD		No	DVD±RW	Backlit	7260 a/b/g/n	upg	None	Finger	None	None	9	Win8 P64	3-Depot	Yes	04/14
20BH004PUS	i7-4800MQ	4GBx2	15.5" 3K	K2100M	720p	512G SSD		No	DVD±RW	Backlit	7260 a/b/g/n	upg	None	Finger	None	X-Rite	9	Win8 P64	3-Depot	Yes	04/14
20BH004RUS	i7-4900MQ	8GBx1	15.5" 3K	K2100M	720p	512G SSD		No	DVD±RW	Backlit	7260 a/b/g/n	upg	None	Finger	NFC	X-Rite	9	Win8 P64	3-Depot	Yes	04/14

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor	Chipset	Mobile Intel QM87 Express Chipset
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable	ExpressCard Smart Card Read Multicard Reader Ports	One slot (ExpressCard/34) <i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, ethernet (RJ-45), Dock connector
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable One modular bay for removable devices (right side, cold swap), 9.5mm high <i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
M.2 SSD		WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
Widescreen display MultiTouch Color calibration Camera (optional)	<i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS None <i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M , PCI Express® x16, 2GB memory	SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch None	Bluetooth™ Ethernet NFC	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel Ethernet Connection I217-LM (Clarkville) <i>Optional:</i> Near Field Communication
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰ AC adapter	<i>15.6W" (WxDxH):</i> 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm <i>6-cell:</i> starting at 5.57 lb (2.53kg); <i>9-cell:</i> starting at 5.95 lb (2.70kg) Glass-Fiber Reinforced Plastic Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication <i>6-cell:</i> up to 6.2 hr; <i>9-cell:</i> up to 11.1 hr <i>dual-core:</i> 135-watt AC adapter; <i>quad-core:</i> 170-watt AC adapter	Security Security chip vPro & iAMT Fingerprint reader Preload	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models <i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor <i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
		Limited warranty ¹² 1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	

See footnotes for more detailed information

ThinkPad W540 20BH (Optimus) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Discrete graphics	Cam-era	Storage	RAID	Optical	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	Color calib	Smart Reader	Bat-tery cells	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20BH001AUS	i7-4800MQ	4GBx1	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH001CUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH001EUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x128G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH001WUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH002QUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x180G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH001KUS	i7-4900MQ	4GBx2	15.6" FHD	K2100M	720p	1x500G 7200	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH001MUS	i7-4900MQ	4GBx2	15.6" FHD	K2100M	720p	1x128G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH001YUS	i7-4900MQ	4GBx2	15.6" FHD	K2100M	720p	1x256G SSD eDrive	No	DVD±RW	None	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH001NUS	i7-4900MQ	4GBx2	15.6" FHD	K2100M	720p	1x180G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH001HUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	2x500G 7200	1	None	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	No	11/13
20BH002EUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	2x500G 7200	0	None	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH002GUS	i7-4800MQ	4GBx2	15.6" FHD	K2100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH002JUS	i7-4800MQ	4GBx2	15.5" 3K	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH002MUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x256G SSD eDrive	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH002RUS	i7-4800MQ	4GBx2	15.6" FHD	K1100M	720p	1x500G 7200	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH002SUS	i7-4800MQ	8GBx1	15.6" FHD	K1100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH002UUS	i7-4800MQ	8GBx1	15.5" 3K	K1100M	720p	1x240G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	None	None	9	Win8 P64	3-Onsite	Yes	11/13
20BH001QUS	i7-4900MQ	8GBx1	15.5" 3K	K2100M	720p	1x500G 5400	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	NFC	X-Rite	None	9	Win8 P64	3-Onsite	No	01/14
20BH001RUS	i7-4900MQ	8GBx1	15.5" 3K	K2100M	720p	1x180G SSD OPAL	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	NFC	X-Rite	None	9	Win8 P64	3-Onsite	No	01/14
20BH001SUS	i7-4900MQ	8GBx1	15.5" 3K	K2100M	720p	1x512G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	NFC	X-Rite	None	9	Win8 P64	3-Onsite	No	01/14
20BH002LUS	i7-4800MQ	4GBx2	15.5" 3K	K2100M	720p	1x512G SSD	No	DVD±RW	Backlit	7260 ac	upg	None	Finger	None	X-Rite	None	9	Win8 P64	3-Onsite	Yes	11/13

• For detailed platform specifications, please see [ThinkPad W540 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 / i7 Extreme Processor	Chipset	Mobile Intel QM87 Express Chipset
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable	ExpressCard Smart Card Read Multicard Reader Ports	One slot (ExpressCard/34) <i>Optional:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.0, two USB 2.0 (one Always On), VGA, Mini DisplayPort / Thunderbolt, ethernet (RJ-45), Dock connector
Optical	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable	Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack
Ultrabay	One modular bay for removable devices (right side, cold swap), 9.5mm high	WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot, exclusive with WWAN card	WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS
M.2 SSD		SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider
Widescreen display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080) , 300 nits, 500:1 contrast ratio <i>Some:</i> 15.5" (394mm) 3K (2880x1620) , 350 nits, 1000:1 contrast ratio, IPS	Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
MultiTouch	None	Ethernet	Intel Ethernet Connection I217-LM (Clarkville)
Color calibration	<i>Optional:</i> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest	NFC	<i>Optional:</i> Near Field Communication
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Security	Power-on password, hard disk password, supervisor password, security keyhole
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4600 in processor, and NVIDIA Quadro® K1100M or K2100M , PCI Express® x16, 2GB memory	Security chip	Trusted Platform Module, TCG 1.2-compliant
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch	Fingerprint reader	<i>Optional:</i> Fingerprint reader on the palm rest, swipe sensor
ThinkLight™	None	Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit
Dimensions ³	<i>15.6W"</i> (WxDxH): 14.83" x 9.77" x 1.10-1.16"; 376.6mm x 248.1mm x 27.9-29.5mm	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite
Weight ²	<i>6-cell:</i> starting at 5.57 lb (2.53kg); <i>9-cell:</i> starting at 5.95 lb (2.70kg)		
Case material	Glass-Fiber Reinforced Plastic		
Battery - type	Li-Ion 6-cell (56Wh) or 9-cell (99.9Wh), HW Authentication		
Battery - life ¹⁰	<i>6-cell:</i> up to 6.2 hr; <i>9-cell:</i> up to 11.1 hr		
AC adapter	<i>dual-core:</i> 135-watt AC adapter; <i>quad-core:</i> 170-watt AC adapter		

See footnotes for more detailed information



Lenovo® ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e

ThinkPad X131e 3368 (Intel) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
3368-5AU	Cel 1007U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Prem 64	08/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle Intel® Celeron® 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1600MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical SATA disk	None (use optional USB-based optical drive) <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution:</i> 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm		
Weight ²	6-cell: from 3.92 lb (1.78kg)		
Case color	Midnight black or Heatwave red (top); black bottom		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 6-cell, HW Authentication		
Battery - life ¹⁰	6-cell (62.4Whr): up to 8.5 hr		
Chipset	Mobile Intel HM77 Express Chipset		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
ExpressCard	None		
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter		
PCIe WWAN	Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS		
Carrier	User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

			Supports ThinkVantage® technologies
			65-watt AC Adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 5.0-compliant (except Celeron models) GREENGUARD® certified (except Celeron models) ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²
			For compatible accessories, please go to O-X131-E sheet; For Lenovo service²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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(JT1-7) August 2013

ThinkPad X131e 3368 (Intel) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
3368-55U	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3368-53U	i3-3227U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3368-4UU	i3-3227U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3368-4SU	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3368-4RU	i3-3227U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3368-4QU	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/13
3368-4MU	Cel 1007U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/13
3368-4HU	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3368-4FU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3368-48U	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3368-46U	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3368-44U	Cel 1007U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3368-3PU	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win8 Pro64	05/13
3368-3NU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win8 Pro64	05/13
3368-3MU	i3-3227U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win8 Pro64	05/13
3368-3LU	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win8 Pro64	05/13
3368-5EU	Cel 1007U	4GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14
3368-48U	Cel 1007U	2GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14
3368-5CU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14
3368-5BU	Cel 1007U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle Intel® Celeron® 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1600MHz) Intel Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical SATA disk	None (use optional USB-based optical drive) <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution: 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI) @60Hz</i>		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm		
Weight ²	6-cell: from 3.92 lb (1.78kg)		
Case color	Midnight black or Heatwave red (top); black bottom		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 6-cell, HW Authentication		
Battery - life ¹⁰	6-cell (62.4Whr): up to 8.5 hr		
Chipset	Mobile Intel HM77 Express Chipset		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
ExpressCard	None		
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter		
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS		
Carrier	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

			Supports ThinkVantage® technologies
			65-watt AC Adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 5.0-compliant (except Celeron models) GREENGUARD® certified (except Celeron models) ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²
			For compatible accessories, please go to O-X131-E sheet;
			For Lenovo service²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

ThinkPad X131e 3367 (Intel) - Windows 8 - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
3367-9GU	Cel 1007U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3367-9FU	Cel 1007U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3367-9EU	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3367-9DU	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3367-9CU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3367-9BU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3367-9AU	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3367-99U	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3367-98U	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3367-8HU	i3-3227U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	05/13
3367-8GU	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win8 Pro64	05/13
3367-8FU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win8 Pro64	05/13
3367-8EU	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win8 Pro64	05/13
3367-8AU	Cel 1007U	4GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14
3367-9ZU	Cel 1007U	2GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14
3367-9YU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14
3367-9XU	Cel 1007U	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/14

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle Intel® Celeron® 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1600MHz) Intel Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1333MHz DDR3 memory controller		
Optical SATA disk	None (use optional USB-based optical drive) <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm		
Weight ²	6-cell: from 3.92 lb (1.78kg)		
Case color	Midnight black or Heatwave red (top); black bottom		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 6-cell, HW Authentication		
Battery - life ¹⁰	6-cell (62.4Whr): up to 8.5 hr		
Chipset	Mobile Intel HM77 Express Chipset		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
ExpressCard	None		
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter		
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS		
Carrier	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Intel AMT	None		
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

			Supports ThinkVantage® technologies
			65-watt AC Adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 5.0-compliant (except Celeron models) GREENGUARD® certified (except Celeron models) ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²
			For compatible accessories, please go to O-X131-E sheet;
			For Lenovo service²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad X131e 3372 (AMD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ^o rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
3372-29U	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	07/12
3372-2AU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3372-2BU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3372-2CU	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	07/12
3372-2DU	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3372-2EU	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3372-2FU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3372-2GU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3372-2UU	E-300	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	09/12
3372-2QU	E-300	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	09/12
3372-2PU	E2-1800	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	09/12
3372-2JU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Pro 64	10/12
3372-3PU	E1-1200	2GBx1	11.6" HD	720p	320G 5400	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	04/13
3372-3NU	E1-1200	4GBx1	11.6" HD	720p	500G 5400	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	04/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache) , integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz) AMD Accelerated Processor E1-1200 (2 cores, 1.40GHz, 1MB L2 cache) , integrated AMD Radeon HD 7310 Graphics, integrated DDR3 memory controller (up to 1066MHz) AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache) , integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)	Preloaded operating system²⁰ Some: Genuine Windows® 7 Home Premium 64 Some: Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, two 204-pin SO-DIMM sockets * System clocks down for processors with 1066MHz or 1333MHz DDR3 memory controller	Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Symantec™ VIP • Windows Live™ Essentials
Optical SATA disk	None (use optional USB-based optical drive) Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™	
mSATA™ SSD	None	
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	AMD Radeon HD 6310, 7310, or 7340 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution: 1920x1080 (VGA or HDMI)</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm	
Weight ²	6-cell: from 3.92 lb (1.78kg)	
Case color	Midnight black or Heatwave red (top); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type	Lithium Ion 6-cell, HW Authentication	
Battery - life ¹⁰	6-cell (62.4Whr): up to 8.5 hr	
Chipset	AMD A68M FCH Chipset	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
ExpressCard	None	
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
PCIe WLAN ⁴	Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter	Supports ThinkVantage® technologies
PCIe WWAN	Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS	65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Carrier	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	For compatible accessories, please go to O-X131-E sheet;
Fingerprint reader	None	For Lenovo service ²² upgrade options, please go to S-TA sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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ThinkPad X131e 3372 (AMD) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCle Mini Card WLAN	PCle Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
3372-32U	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3372-2ZU	E-300	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3372-2YU	E2-1800	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3372-2XU	E-300	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3372-2WU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3372-2VU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3372-2TU	E-300	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	10/12
3372-2SU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	10/12
3372-2RU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	10/12
3372-2NU	E2-1800	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3372-2MU	E-300	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	10/12
3372-3MU	E1-1200	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3372-3LU	E1-1200	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3372-3JU	E1-1200	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64	02/13
3372-3HU	E1-1200	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/13
3372-3GU	E1-1200	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3372-3FU	E1-1200	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3372-3QU	E1-1200	2GBx1	11.6" HD	720p	320G 5400	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	04/13
Positioning Processor	<p>Entry ultraportable for excellent usability and reliability; one spindle</p> <p>AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)</p> <p>AMD Accelerated Processor E1-1200 (2 cores, 1.40GHz, 1MB L2 cache), integrated AMD Radeon HD 7310 Graphics, integrated DDR3 memory controller (up to 1066MHz)</p> <p>AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache), integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)</p>									<p>Preloaded operating system²⁰</p> <ul style="list-style-type: none"> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit <p>Preloaded applications⁵ (only some listed)</p> <ul style="list-style-type: none"> - Windows 7 models <ul style="list-style-type: none"> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager - Windows 8 models <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models <ul style="list-style-type: none"> • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™ 				
Memory	<p>8GB max⁷ / PC3-12800 1600MHz DDR3, non-parity, two 204-pin SO-DIMM sockets</p> <p>* System clocks down for processors with 1066MHz or 1333MHz DDR3 memory controller</p>													
Optical SATA disk	<p>None (use optional USB-based optical drive)</p> <p>Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable</p> <p>Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™</p>													
mSATA™ SSD	None													
Widescreen display	<p>11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio</p>													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	<p>AMD Radeon HD 6310, 7310, or 7340 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display;</p> <p><i>Maximum external resolution: 1920x1080 (VGA or HDMI)</i></p>													
Keyboard	6-row, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³													
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions ³	<p>11.6W" (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm</p>													
Weight ²	6-cell: from 3.92 lb (1.78kg)													
Case color	Midnight black or Heatwave red (top); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type	Lithium Ion 6-cell, HW Authentication													
Battery - life ¹⁰	6-cell (62.4Whr): up to 8.5 hr													
Chipset	AMD A68M FCH Chipset													
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
ExpressCard	None													
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCle Mini Card	Two PCI Express Mini Card slots													
PCle WLAN ⁴	<p>Some: 11b/g/n, PCle Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter</p> <p>Some: 11a/b/g/n, PCle Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter</p>													
PCle WWAN	<p>Some: Wireless WAN upgradable</p> <p>Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS</p>													
Carrier	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider													
Modem	None													
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Ethernet	Realtek® RTL8111F Gigabit Network Connection													
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	None													
Fingerprint reader	None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available									<p>Supports ThinkVantage® technologies</p> <p>65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²</p> <p>For compatible accessories, please go to O-X131-E sheet;</p> <p>For Lenovo service²² upgrade options, please go to S-TA sheet</p>				

See footnotes for more detailed information

US model(s) withdrawn effective October 2012 or March 2013

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(JT11-3) April 2013

ThinkPad X131e 3371 (AMD)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
3371-2HU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	07/12
3371-2JU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3371-2KU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3371-2LU	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	07/12
3371-2MU	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3371-2NU	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3371-2PU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3371-2RU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000 select	Black	None	BT	6	Pro 64	10/12	

Positioning Processor	<p><i>Entry ultraportable for excellent usability and reliability; one spindle</i></p> <p>AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)</p> <p>AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache), integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)</p>									<p>Preloaded operating system²⁰</p> <p>Some: Genuine Windows® 7 Home Premium 64</p> <p>Some: Genuine Windows 7 Professional 64</p> <p>Ready to install applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Rescue and Recovery™ • Password Manager <p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Symantec™ VIP • Windows Live™ Essentials 				
Memory	<p>8GB max⁷ / PC3-12800 1600MHz DDR3, non-parity, two 204-pin SO-DIMM sockets</p> <p>* System clocks down for processors with 1066MHz or 1333MHz DDR3 memory controller</p>													
Optical SATA disk	<p>None (use optional USB-based optical drive)</p> <p>Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable</p> <p>Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™</p>													
mSATA™ SSD	None													
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	<p>AMD Radeon HD 6310 or 7340 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display;</p> <p><i>Maximum external resolution: 1920x1080 (VGA or HDMI)</i></p>													
Keyboard	6-row, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³													
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm													
Weight ²	6-cell: from 3.92 lb (1.78kg)													
Case color	Midnight black or Heatwave red (top); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type	Lithium Ion 6-cell, HW Authentication													
Battery - life ¹⁰	6-cell (62.4Whr): up to 8.5 hr													
Chipset	AMD A68M FCH Chipset													
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
ExpressCard	None													
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCIe Mini Card	Two PCI Express Mini Card slots													
PCIe WLAN ⁴	<p>Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter</p> <p>Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter</p>													
PCIe WWAN	<p>Some: Wireless WAN upgradable</p> <p>Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS</p>													
Carrier	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider													
Modem	None													
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Ethernet	Realtek® RTL8111F Gigabit Network Connection													
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	None													
Fingerprint reader	None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(JT11-2) February 2013

ThinkPad X131e 3371 (AMD) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
3371-7RU	E-300	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3371-7QU	E-300	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3371-7PU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3371-7NU	E2-1800	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3371-7MU	E2-1800	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3371-7LU	E2-1800	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3371-7KU	E-300	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3371-7JU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3371-8AU	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	12/12
3371-89U	E-300	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	12/12
3371-88U	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	12/12
3371-87U	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	12/12
3371-86U	E2-1800	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	12/12
3371-8EU	E1-1200	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3371-8DU	E1-1200	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win8 64	02/13
3371-8CU	E1-1200	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13
3371-8BU	E1-1200	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	02/13

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache) , integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz) AMD Accelerated Processor E1-1200 (2 cores, 1.40GHz, 1MB L2 cache) , integrated AMD Radeon HD 7310 Graphics, integrated DDR3 memory controller (up to 1066MHz) AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache) , integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)									Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Skype™				
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, two 204-pin SO-DIMM sockets * System clocks down for processors with 1066MHz or 1333MHz DDR3 memory controller													
Optical SATA disk	None (use optional USB-based optical drive) Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™													
mSATA™ SSD	None													
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	AMD Radeon HD 6310, 7310, or 7340 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Maximum external resolution: 1920x1080 (VGA or HDMI)													
Keyboard	6-row, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³													
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm													
Weight ²	6-cell : from 3.92 lb (1.78kg)													
Case color	Midnight black or Heatwave red (top); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type	Lithium Ion 6-cell, HW Authentication													
Battery - life ¹⁰	6-cell (62.4Whr) : up to 8.5 hr													
Chipset	AMD A68M FCH Chipset													
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
ExpressCard	None													
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCIe Mini Card	Two PCI Express Mini Card slots													
PCIe WLAN ⁴	Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter													
PCIe WWAN	Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS													
Carrier	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider													
Modem	None													
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Ethernet	Realtek® RTL8111F Gigabit Network Connection													
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	None													
Fingerprint reader	None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information

US model(s) withdrawn effective October 2012 or March 2013

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ThinkPad X131e Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann	06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann	06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann	12/11/12
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ Mobile Broadband Option	0A36185	ann	04/12/11
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ThinkPad Expansion

USB 2.0 Port Replicator with Digital Video	0A33942	ann	03/22/11
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Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 35+ (6-cell)	0A36292	ann	07/05/11
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 12.5" widescreen models:

ThinkPad 12.5" Ultrabook Topload	0B47416	ann	12/04/12
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Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12
Lenovo Sport Backpack - Blue	0B47298	ann	08/28/12
Lenovo Sport Slimcase - Blue	0B47300	ann	08/28/12
Lenovo Sport Messenger - Blue	0B47299	ann	08/28/12
Lenovo Sport Backpack - Grey	0B47301	ann	08/28/12
Lenovo Sport Slimcase - Grey	0B47303	ann	08/28/12
Lenovo Sport Messenger - Grey	0B47302	ann	08/28/12

More information at www.lenovo.com/support/cases

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
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⁶⁹ DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
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ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann	08/16/11
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More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo HDMI to HDMI Monitor Cable	0B47070	ann	05/22/12
Lenovo HDMI to VGA Monitor Cable	0B47069	ann	06/26/12
Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann	08/14/12
Lenovo USB Soundbar	0A36190	ann	05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad X140e



Lenovo ThinkPad X140e



Lenovo ThinkPad X140e



Lenovo ThinkPad X140e



Lenovo ThinkPad X140e



Lenovo ThinkPad X140e

ThinkPad X140e 20BL (AMD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger-print reader	Battery cells	Preload	Ann Date (mm/yy)
20BL000BUS	A4-5000	4GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	None	None	Black	None	6	Win7 Pro64 DG Win8	11/13
20BL000CUS	E1-2500	2GBx1	11.6" HD	720p	500G 7200	TP 11b/g/n	None	None	Black	None	6	Win7 Pro64 DG Win8	11/13
20BL000DUS	A4-5000	2GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	None	None	Black	None	6	Win7 Pro64 DG Win8	11/13
20BL000EUS	E1-2500	2GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	None	None	Black	None	6	Win7 Pro64 DG Win8	11/13
20BL000FUS	A4-5000	4GBx1	11.6" HD	720p	500G 7200	TP 11b/g/n	None	None	Black	None	6	Win7 Pro64 DG Win8	11/13
20BL000GUS	A4-5000	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	None	None	Black	None	6	Win7 Pro64 DG Win8	11/13
20BL0014US	E1-2500	4GBx1	11.6" HD	720p	500G 7200	TP 11a/b/g/n	None	None	Black	None	6	Win7 Pro64 DG Win8.1	04/14

• **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD APU E1-2500 (2 cores, 1.40GHz, 1MB L2 cache), integrated AMD Radeon™ HD 8240 Graphics, DDR3L memory controller (up to 1333MHz) AMD APU A4-5000 (4 cores, 1.50GHz, 2MB L2 cache), integrated AMD Radeon HD 8330 Graphics, DDR3L memory controller (up to 1600MHz)										Preloaded operating system²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit		
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, two 204-pin SO-DIMM sockets * System clocks down for processors with 1333MHz DDR3 memory controller										Preloaded applications⁵ (only some listed) • Lenovo Solution Center • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • Lenovo Cloud Storage by SugarSync • Intel AppUp® • PC Device Stage • Adobe® Reader® • Nitro Pro • Evernote® • Skype™ • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm, upgradable <i>Some:</i> Hard Disk Drive / SATA 6.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™												
mSATA™ SSD	None												
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	AMD Radeon HD 8240 or 8330 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution:</i> 1920x1080 (VGA or HDMI)												
Keyboard	6-row, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³												
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch												
ThinkLight™	None												
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.38"; 293.4mm x 216mm x 35mm												
Weight ²	6-cell: from 3.92 lb (1.78kg)												
Case color	Midnight black or Heatwave red (top); black bottom												
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic												
Battery - type	Lithium Ion 6-cell (62.4Whr), HW Authentication												
Battery - life ¹⁰	6-cell: up to 8.5 hr												
Chipset	AMD SoC (System on Chip) platform												
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	Two USB 3.0, one powered USB 2.0, VGA, HDMI, ethernet (RJ-45)												
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter												
WWAN	None												
Carrier	None												
Modem	None												
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Ethernet	Realtek® RTL8111F Gigabit Network Connection												
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	None												
Fingerprint reader	None												
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												

See footnotes for more detailed information

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ThinkPad X140e 20BL (AMD) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
20BL0004US	A4-5000	4GBx1	11.6" HD	720p	500G 5400	TP 11a/b/g/n	None	None	Black	None	BT	6	Win8 64	11/13
20BL0005US	A4-5000	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	None	None	Black	None	BT	6	Win8 64	11/13
20BL0006US	E1-2500	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	None	None	Black	None	BT	6	Win8 64	11/13
20BL0007US	E1-2500	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	None	None	Black	None	BT	6	Win8 64	11/13
20BL0008US	E1-2500	2GBx1	11.6" HD	720p	500G 7200	TP 11b/g/n	None	None	Black	None	BT	6	Win8 64	11/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD APU E1-2500 (2 cores, 1.40GHz, 1MB L2 cache) , integrated AMD Radeon™ HD 8240 Graphics, DDR3L memory controller (up to 1333MHz) AMD APU A4-5000 (4 cores, 1.50GHz, 2MB L2 cache) , integrated AMD Radeon HD 8330 Graphics, DDR3L memory controller (up to 1600MHz)			Preloaded operating system ²⁰ - Windows® 8 64-bit Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Lenovo Solution Center• Lenovo Support• Lenovo Companion• ThinkVantage System Update• Lenovo Cloud Storage by SugarSync - Metro• Lenovo Cloud Storage by SugarSync• Intel AppUp®• PC Device Stage• AccuWeather• Amazon Kindle• Nitro Pro• Evernote®• Skype™• Rara Streaming• Norton Studio• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions)
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, two 204-pin SO-DIMM sockets * System clocks down for processors with 1333MHz DDR3 memory controller			
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm, upgradable <i>Some:</i> Hard Disk Drive / SATA 6.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™			
mSATA™ SSD	None			
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	AMD Radeon HD 8240 or 8330 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution:</i> 1920x1080 (VGA or HDMI)			
Keyboard	6-row, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³			
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch			
ThinkLight™	None			
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.38"; 293.4mm x 216mm x 35mm			
Weight ²	6-cell: from 3.92 lb (1.78kg)			
Case color	Midnight black or Heatwave red (top); black bottom			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type	Lithium Ion 6-cell (62.4Whr), HW Authentication			
Battery - life ¹⁰	6-cell: up to 8.5 hr			
Chipset	AMD SoC (System on Chip) platform			
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	Two USB 3.0, one powered USB 2.0, VGA, HDMI, ethernet (RJ-45)			
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter			
PCIe WWAN	None			
Carrier	None			
Modem	None			
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Ethernet	Realtek® RTL8111F Gigabit Network Connection			
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	None			
Fingerprint reader	None			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies
65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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ThinkPad X140e 20BM (AMD)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm		PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
20BM0009US	E1-2500	4GBx1	11.6" HD	720p	500G	7200	TP 11a/b/g/n	None	None	Black	None	BT	6	Win7 Pro64 DG	11/13
20BM000AUS	A4-5000	4GBx1	11.6" HD	720p	500G	7200	TP 11a/b/g/n	None	None	Black	None	BT	6	Win7 Pro64 DG	11/13
20BM000BUS	E1-2500	4GBx1	11.6" HD	720p	500G	7200	TP 11b/g/n	None	None	Black	None	BT	6	Win7 Pro64 DG	11/13
20BM000CUS	E1-2500	2GBx1	11.6" HD	720p	500G	7200	TP 11a/b/g/n	None	None	Black	None	BT	6	Win7 Pro64 DG	11/13
20BM000DUS	A4-5000	4GBx1	11.6" HD	720p	128G	SSD	TP 11a/b/g/n	None	None	Black	None	BT	6	Win7 Pro64 DG	11/13

Positioning Processor	<i>Entry ultraportable for excellent usability and reliability; one spindle</i> AMD APU E1-2500 (2 cores, 1.40GHz, 1MB L2 cache), integrated AMD Radeon™ HD 8240 Graphics, DDR3L memory controller (up to 1333MHz) AMD APU A4-5000 (4 cores, 1.50GHz, 2MB L2 cache), integrated AMD Radeon HD 8330 Graphics, DDR3L memory controller (up to 1600MHz)											Preloaded operating system²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Lenovo Solution Center• ThinkVantage Product Recovery• Rescue and Recovery™• ThinkVantage System Update• Lenovo Cloud Storage by SugarSync• Intel AppUp®• PC Device Stage• Adobe® Reader®• Nitro Pro• Evernote®• Skype™• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions)			
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, two 204-pin SO-DIMM sockets * System clocks down for processors with 1333MHz DDR3 memory controller														
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm, upgradable <i>Some:</i> Hard Disk Drive / SATA 6.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™														
mSATA™ SSD	None														
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	AMD Radeon HD 8240 or 8330 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution:</i> 1920x1080 (VGA or HDMI)														
Keyboard	6-row, spill-resistant, multimedia Fn keys														
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³														
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch														
ThinkLight™	None														
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 1.38"; 293.4mm x 216mm x 35mm														
Weight ²	<i>6-cell:</i> from 3.92 lb (1.78kg)														
Case color	Midnight black or Heatwave red (top); black bottom														
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic														
Battery - type	Lithium Ion 6-cell (62.4Whr), HW Authentication														
Battery - life ¹⁰	<i>6-cell:</i> up to 8.5 hr														
Chipset	AMD SoC (System on Chip) platform														
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	Two USB 3.0, one powered USB 2.0, VGA, HDMI, ethernet (RJ-45)														
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter														
PCIe WWAN	None											Supports ThinkVantage® technologies			
Carrier	None														
Modem	None														
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
Ethernet	Realtek® RTL8111F Gigabit Network Connection														
Audio support	HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack											65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
Security	Power-on password, hard disk password, supervisor password, security keyhole											For Lenovo service ²² upgrade options, please go to S-TA sheet			
Security chip	None														
Fingerprint reader	None														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available														

See footnotes for more detailed information

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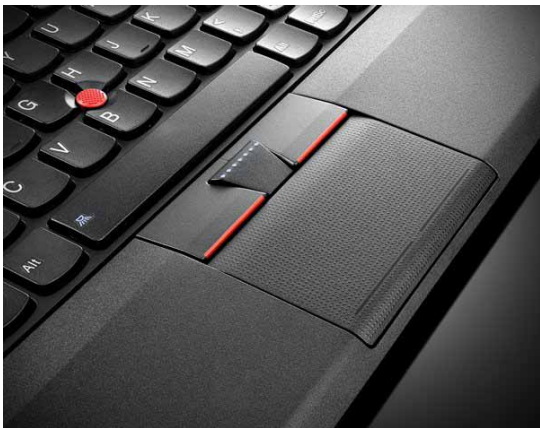
Lenovo® ThinkPad X230



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Lenovo ThinkPad X230

ThinkPad X230 (2320) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB ³ rpm	Optical in UltraBase Series 3	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger-print reader	Bat-tery cells	Intel AMT	Intel vPro	Preload (mm/yy)	Ann date
2320-8VU	i5-3210M	4GBx1	12.5" HD	128G SSD	Optional	Opt	None	Intel 2200 ²⁸	WWAN upg	Fing	6	No	No	Pro 64	06/12
2320-33U	i5-3210M	4GBx1	12.5" HD	180G SSD	Optional	Opt	None	Intel 2200	WWAN upg	Fing	6	No	No	Pro 64	06/12
2320-32U	i5-3210M	4GBx1	12.5" HD	500G 7200	Optional	Opt	None	Intel 2200	WWAN upg	Fing	6	No	No	Pro 64	06/12
2320-22U	i5-3210M	4GBx1	12.5" HD	320G 7200	Optional	Opt	None	Intel 2200	WWAN upg	Fing	6	No	No	Pro 64	06/12
2320-A9U	i7-3520M	4GBx1	12.5" HD	180G SSD	DVD±RW	UltraB	Backlit	Intel 6205 ²⁸	WWAN upg	Fing	6	iAMT	vPro	Pro 64	07/12
2320-A7U	i5-3320M	4GBx1	12.5" HD	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	Fing	6	iAMT	vPro	Pro 64	07/12
2320-A5U	i5-3320M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	Fing	6	iAMT	vPro	Pro 64	07/12
2320-A3U	i5-3210M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 2200	WWAN upg	Fing	6	No	No	Pro 64	07/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Access Connections™ • ThinkVantage Power Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Microsoft® Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display Camera	12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		Supports ThinkVantage® technologies
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None <i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr		ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(DSH2-1) August 2012

ThinkPad X230 (2320) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Battery Carrier cells	Intel vPro	Pre-load	Ann date (mm/yy)
2320-8UU	i5-3320M	4GBx1	12.5" HD	720p	128G SSD	DVD±RW	UltraB	None	Intel 6205 ²⁸	WWAN upg	None	6	vPro	Pro 64 06/12
2320-8TU	i7-3520M	4GBx1	12.5" HD	720p	128G SSD	DVD±RW	UltraB	None	Intel 6205	WWAN upg	None	6	vPro	Pro 64 06/12
2320-3BU	i5-3320M	4GBx1	12.5" HD	None	320G 7200	Optional	Opt	None	Intel 6205	Gobi 3000	select	6	vPro	Pro 64 06/12
2320-3AU	i7-3520M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	None	Intel 6205	Gobi 3000	select	6	vPro	Pro 64 06/12
2320-39U	i7-3520M	4GBx1	12.5" HD	720p	500G 7200	DVD±RW	UltraB	None	Intel 6205	WWAN upg	None	6	vPro	Pro 64 06/12
2320-38U	i7-3520M	4GBx1	12.5" HD	720p	180G SSD	DVD±RW	UltraB	None	Intel 6205	WWAN upg	None	6	vPro	Pro 64 06/12
2320-37U	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	DVD±RW	UltraB	None	Intel 6205	WWAN upg	None	6	vPro	Pro 64 06/12
2320-36U	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	DVD±RW	UltraB	None	Intel 6205	WWAN upg	None	6	vPro	Pro 64 06/12
2320-35U	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205	WWAN upg	None	6	vPro	Pro 64 06/12
2320-34U	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	Intel 6205	WWAN upg	None	6	vPro	Pro 64 06/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (only some listed) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Microsoft® Office preloaded; purchase a product key to activate			
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3													
mSATA™ SSD	None													
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio													
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)													
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										Supports ThinkVantage® technologies			
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None <i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr													
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)													
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS <i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider													
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Security Security chip Fingerprint reader														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available										Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			

See footnotes for more detailed information

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ThinkPad X230 (2320) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB ^a rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Battery cells	Intel AMT	Intel vPro	Preload	Ann date (mm/yy)
2320-HQU	i7-3520M	4GBx1	12.5" HD	180G SSD	DVD±RW	UltraB	Backlit	Intel 6205 ²⁸	WWAN upg	6	iAMT	vPro	Win7 Pro64	10/12
2320-HPU	i5-3320M	4GBx1	12.5" HD	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win7 Pro64	10/12
2320-HNU	i5-3320M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win7 Pro64	10/12
2320-HMU	i5-3210M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 2200	WWAN upg	6	No	No	Win7 Pro64	10/12
2320-AAU	i7-3520M	4GBx1	12.5" HD	180G SSD	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win8 Pro64	10/12
2320-A8U	i5-3320M	4GBx1	12.5" HD	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win8 Pro64	10/12
2320-A6U	i5-3320M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win8 Pro64	10/12
2320-A4U	i5-3210M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 2200	WWAN upg	6	No	No	Win8 Pro64	10/12
2320-JCU	i7-3520M	4GBx1	12.5" HD Prem	180G SSD	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win7 Pro64	10/12
2320-JBU	i5-3320M	4GBx1	12.5" HD Prem	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win7 Pro64	10/12
2320-JAU	i5-3320M	4GBx1	12.5" HD Prem	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	6	iAMT	vPro	Win7 Pro64	10/12
2320-J9U	i5-3210M	4GBx1	12.5" HD Prem	500G 7200	Optional	Opt	Backlit	Intel 2200	WWAN upg	6	No	No	Win7 Pro64	10/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)		Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ²	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy		
Case material	Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery		
Standard Battery	None		
External Battery	<i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr		
Battery - life ¹⁰			
Chipset	Mobile Intel QM77 Express Chipset		
Ultrabase	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side)		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Smart Card Read	None		
Ports	Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2		
PCIe WWAN	Wireless WAN upgradable		
Carrier	None		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	<i>Some:</i> Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(DSH2-7) November 2012

ThinkPad X230 (2320) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB ⁵ rpm	Optical in UltraBase Series 3	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Battery cells	Intel AMT	Intel vPro	Preload	Ann date (mm/yy)
2320-JPU	i5-3230M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 2200	Finger	6	None	No	Win7 Pro64	02/13
2320-KMU	i5-3360M	4GBx1	12.5" HD	240G FDE SSD	Optional	Opt	Backlit	Intel 6205 ²⁸	Finger	6	iAMT	vPro	Win8 Pro64	02/13
2320-KLU	i5-3320M	4GBx1	12.5" HD	180G SSD	Optional	Opt	Backlit	Intel 6205	Finger	6	iAMT	vPro	Win8 Pro64	02/13
2320-KKU	i5-3230M	4GBx1	12.5" HD	180G SSD	Optional	Opt	Backlit	Intel 2200	Finger	6	None	No	Win7 Pro64	02/13
2320-KJU	i5-3230M	4GBx1	12.5" HD	180G SSD	Optional	Opt	Backlit	Intel 2200	Finger	6	None	No	Win8 Pro64	02/13
2320-KHU	i5-3230M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 2200	Finger	6	None	No	Win8 Pro64	02/13
2320-L9U	i7-3520M	4GBx1	12.5" HD	320G 7200 OPAL	Optional	Opt	Backlit	Intel 6205	Finger	6	iAMT	vPro	Win7 Pro64	04/13
2320-L8U	i7-3520M	4GBx1	12.5" HD	256G SSD	Optional	Opt	Backlit	Intel 6205	Finger	6	iAMT	vPro	Win7 Pro64	04/13
2320-L7U	i5-3320M	4GBx1	12.5" HD	256G SSD	Optional	Opt	Backlit	Intel 6205	Finger	6	iAMT	vPro	Win7 Pro64	04/13
2320-L6U	i5-3320M	4GBx1	12.5" HD	320G 7200 OPAL	Optional	Opt	Backlit	Intel 6205	Finger	6	iAMT	vPro	Win7 Pro64	04/13
2320-LVU	i7-3520M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 6205	None	6	iAMT	vPro	Win7 Pro64	07/13
2320-LUU	i7-3520M	4GBx1	12.5" HD	256G SSD	Optional	Opt	Backlit	Intel 6205	None	6	iAMT	vPro	Win7 Pro64	07/13
2320-LTU	i5-3320M	4GBx1	12.5" HD	500G 7200	Optional	Opt	Backlit	Intel 6205	None	6	iAMT	vPro	Win7 Pro64	07/13
2320-LSU	i5-3320M	4GBx1	12.5" HD	128G SSD	Optional	Opt	Backlit	Intel 6205	None	6	iAMT	vPro	Win7 Pro64	07/13
Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3													
mSATA™ SSD	None													
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio									- All models • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate				
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)									Supports ThinkVantage® technologies				
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions									ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632				
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None <i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr													
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Option:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)													
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 Wireless WAN upgradable													
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Security Security chip Fingerprint reader										65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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ThinkPad X230 (2324)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Global (G) Intel vPro (P)	GMP Pre-load	Ann date (mm/yy)
2324-4TU	i5-3320M	4GBx1	12.5" HD	180G SSD	Optional	Opt	None	Intel 6205 ²⁸	upg	Fing	BT	6	vPro	Pro 64	06/12
2324-3YU	i7-3520M	4GBx1	12.5" HD Prem	180G SSD	Optional	Opt	None	Intel 6205	upg	Fing	BT	9	vPro	Pro 64	06/12
2324-3XU	i7-3520M	4GBx1	12.5" HD	500G 7200	Optional	Opt	None	Intel 6205	upg	Fing	BT	9	vPro	Pro 64	06/12
2324-3WU	i5-3320M	4GBx1	12.5" HD Prem	500G 7200	Optional	Opt	None	Intel 6205	upg	Fing	BT	6	vPro	G Pro 64	06/12
2324-3VU	i5-3320M	4GBx1	12.5" HD Prem	500G 7200	DVD±RW	UltraB	None	Intel 6205	upg	Fing	BT	6	vPro	G Pro 64	06/12
2324-3UU	i7-3520M	4GBx1	12.5" HD Prem	320G 7200	Optional	Opt	None	Intel 6205	upg	Fing	BT	9	vPro	Pro 64	06/12
2324-3TU	i5-3360M	4GBx1	12.5" HD	320G 7200	Optional	Opt	None	Intel 6205	upg	Fing	BT	9	vPro	Pro 64	06/12
2324-3SU	i5-3360M	4GBx1	12.5" HD	320G 7200	Optional	Opt	None	Intel 6205	upg	No	No	6	vPro	Pro 64	06/12
2324-3RU	i5-3360M	4GBx1	12.5" HD Prem	320G 7200	Optional	Opt	None	Intel 6205	upg	Fing	BT	9	vPro	Pro 64	06/12
2324-3QU	i5-3320M	4GBx1	12.5" HD Prem	320G 7200	Optional	Opt	None	Intel 6205	upg	Fing	BT	6	vPro	G Pro 64	06/12
2324-3PU	i5-3320M	4GBx1	12.5" HD	320G 7200	DVD±RW	UltraB	None	Intel 6205	upg	Fing	BT	6	vPro	G Pro 64	06/12
2324-5XU	i7-3520M	4GBx1	12.5" HD	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	upg	Fing	BT	6	vPro	Pro 64	07/12
2324-5VU	i5-3320M	4GBx1	12.5" HD	180G SSD	DVD±RW	UltraB	Backlit	Intel 6205	upg	Fing	BT	6	vPro	Pro 64	07/12

• A depot repair service 3-year limited warranty

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (dual-core, 2.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None <i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr		
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Security Security chip Fingerprint reader			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(DSH2-3) August 2012

ThinkPad X230 (2324) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ³ rpm	Optical in Ultrabay	ThinkPad Backlit in Ultrabase Series 3	key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Bat- tery cells	Global (G) Intel vPro (P)	Ann date (mm/yy)
2324-3NU	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	Intel 6205 ²⁸	Gobi select	Fing	BT	6 vPro	Pro 64 06/12
2324-3MU	i5-3320M	4GBx1	12.5" HD	No	320G 7200	Optional	Opt	None	Intel 6205	upg None	No	No	6 vPro	Pro 64 06/12
2324-2LU	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	Intel 6205	upg None	Fing	BT	6 vPro	Pro 64 06/12
2324-25U	i5-3360M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	None	Intel 6205	upg None	Fing	BT	6 vPro	Pro 64 06/12
2324-23U	i7-3520M	4GBx1	12.5" HD Prem	No	180G SSD	Optional	Opt	None	Intel 6300 ²⁸	upg None	Fing	BT	9 vPro	Pro 64 06/12
2324-22U	i5-3360M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	Intel 6205	upg None	No	No	6 vPro	Pro 64 06/12
2324-5SU	i5-3320M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	None	Intel 6205	upg None	Fing	BT	6 vPro	Pro 64 07/12
2324-5RU	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	DVD±RW	UltraB	None	Intel 6205	upg None	Fing	BT	6 vPro	Pro 64 07/12
2324-5QU	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	None	Intel 6205	upg None	Fing	BT	6 vPro	Pro 64 07/12
2324-5NU	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	Intel 6205	upg None	No	BT	6 vPro	Pro 64 07/12
2324-5PU	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205	upg None	Fing	BT	6 vPro	Pro 64 07/12

• A depot repair service 3-year limited warranty

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (dual-core, 2.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing) <i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None <i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr		
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) <i>2324-5PU model:</i> Gemplus Smart Card Reader in ExpressCard slot Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS <i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider		
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Security Security chip Fingerprint reader	Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) withdrawn effective March 2013

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(DSH2-4) August 2012

ThinkPad X230 (2324) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	key-board	PCIe Mini Card WLAN	Finger print reader	Blue-tooth	Bat-tery	Intel AMT	Global (G) Intel vPro	Intel GMP (P)	Preload	Ann date (mm/yy)
2324-67U	i5-3320M	4GBx1	12.5" HD	No	320G 7200	Optional	Opt	None	Intel 2200	No	No	No	6	No	No	G Win8 Pro64	10/12
2324-66U	i7-3520M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	None	Intel 6205 ²⁸	Fing	BT	6	iAMT	vPro	G Win8 Pro64	10/12	
2324-65U	i7-3520M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	None	Intel 6205	Fing	BT	6	iAMT	vPro	G Win8 Pro64	10/12	
2324-64U	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	None	Intel 6205	Fing	BT	6	iAMT	vPro	G Win8 Pro64	10/12	
2324-63U	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	None	Intel 6205	Fing	BT	6	iAMT	vPro	G Win8 Pro64	10/12	
2324-62U	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	Intel 6205	Fing	BT	6	iAMT	vPro	G Win8 Pro64	10/12	
2324-5YU	i7-3520M	4GBx1	12.5" HD	720p	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win8 Pro64	10/12	
2324-5WU	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	DVD±RW	UltraB	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win8 Pro64	10/12	
2324-8AU	i7-3520M	4GBx1	12.5" HD Prem	720p	256G SSD	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win7 Pro64	12/12	
2324-89U	i7-3520M	4GBx1	12.5" HD Prem	720p	240G FDE SSD	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win7 Pro64	12/12	
2324-88U	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win7 Pro64	12/12	
2324-87U	i5-3320M	4GBx1	12.5" HD	720p	256G SSD	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win7 Pro64	12/12	
2324-86U	i5-3320M	4GBx1	12.5" HD	720p	128G SSD	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win7 Pro64	12/12	
2324-85U	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win7 Pro64	12/12	
2324-84U	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win7 Pro64	12/12	
2324-93U	i5-3320M	4GBx1	12.5" HD	720p	240G FDE SSD	Optional	Opt	Backlit	Intel 6205	Fing	BT	6	iAMT	vPro	Win8 Pro64	02/13	
Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit					
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager - Windows 8 models • Lenovo Support • Lenovo Companion - All models • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate					
Optical Ultrabay SATA disk	Some: DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3																
mSATA™ SSD	None																
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: (Premium) 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing) Some: HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus																
Camera	Some: HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus																
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)											Supports ThinkVantage® technologies					
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions											ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g					
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	without UltraBase; 4/6-cell: 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm 4-cell: from 2.96 lb (1.34kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg) Display cover: Magnesium + PCABS; Bottom: Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None 4-cell (28.8Whr): up to 4.6 hr; 6-cell (62.4Whr): up to 10.3 hr; 9-cell (93.6Whr): up to 15.5 hr; external battery (64Whr, 0A36280): up to 10.6 hr; 9-cell plus external battery: up to 26.1 hr																
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset Some: ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)																
PCIe Mini Card PCIe WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2																
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None None Some: Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Some: Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip																
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip																
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available																

See footnotes for more detailed information

ThinkPad X230 (2324) - Windows 8 - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB ² rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Bat-tery Intel vPro	Preload	Ann date (mm/yy)
2324-9CU	i7-3520M	4GBx1	12.5" HD	320G 7200 OPAL	Optional	Optional	Backlit	Intel 6205 ²⁸	WWAN upg	Finger	6 vPro	Win7 Pro64	04/13
2324-9BU	i7-3520M	4GBx1	12.5" HD	256G SSD	Optional	Optional	Backlit	Intel 6205	WWAN upg	Finger	6 vPro	Win7 Pro64	04/13
2324-9AU	i5-3320M	4GBx1	12.5" HD	320G 7200 OPAL	Optional	Optional	Backlit	Intel 6205	WWAN upg	Finger	6 vPro	Win7 Pro64	04/13
2324-9YU	i7-3520M	4GBx1	12.5" HD	256G SSD	Optional	Optional	Backlit	Intel 6205	WWAN upg	None	6 vPro	Win7 Pro64	07/13
2324-9XU	i7-3520M	4GBx1	12.5" HD	500G 7200	Optional	Optional	Backlit	Intel 6205	WWAN upg	None	6 vPro	Win7 Pro64	07/13
2324-9WU	i7-3520M	4GBx1	12.5" HD	128G SSD	Optional	Optional	Backlit	Intel 6205	WWAN upg	None	6 vPro	Win7 Pro64	07/13
2324-9VU	i5-3320M	4GBx1	12.5" HD	500G 7200	Optional	Optional	Backlit	Intel 6205	WWAN upg	None	6 vPro	Win7 Pro64	07/13
2324-9UU	i5-3320M	4GBx1	12.5" HD	128G SSD	Optional	Optional	Backlit	Intel 6205	WWAN upg	None	6 vPro	Win7 Pro64	07/13

• A depot repair service 3-year limited warranty

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Power Manager - Windows 8 models • Lenovo Support - All models • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg)		
Weight ²	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy		
Case material	Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery		
Standard Battery	None		
External Battery	<i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr		
Battery - life ¹⁰			
Chipset	Mobile Intel QM77 Express Chipset		
Ultrabase	<i>Option:</i> ThinkPad Ultrabase Series 3 (see right side)		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Smart Card Read	None		
Ports	Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
PCIe WWAN	Wireless WAN upgradable		
Carrier	None		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole		
Security	Trusted Platform Module, TCG 1.2-compliant		
Security chip	<i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Fingerprint reader			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

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Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase Series 3	ThinkPad Backlit key-board	PCle Mini Card WLAN	PCle Mini Card WWAN	Smart Card Reader	Finger print reader	Blue-tooth	Bat- tery cells vPro	Global (G) Intel GMP (P) (mm/yy)	Ann Date
2325-5JU	i7-3520M	4GBx1	12.5" HD	720p	128G SSD	Optional	Opt	None	6205 ²⁸	upg	None	None	Fing BT	6 vPro	06/12
2325-2VU	i7-3520M	4GBx1	12.5" HD Prem	720p	180G SSD	Optional	Opt	None	6205	upg	None	None	Fing BT	9 vPro	06/12
2325-2UU	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	None	6205	upg	None	None	Fing BT	6 vPro G P	06/12
2325-2TU	i7-3520M	4GBx1	12.5" HD Prem	720p	500G 7200	Optional	Opt	None	6205	upg	None	None	Fing BT	9 vPro	06/12
2325-2SU	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	DVD±RW	UltraB	None	6205	upg	None	None	Fing BT	6 vPro G P	06/12
2325-2RU	i5-3360M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	None	6205	upg	None	None	Fing BT	9 vPro	06/12
2325-2QU	i5-3320M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	None	6205	upg	None	None	Fing BT	6 vPro G P	06/12
2325-2PU	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	6205	Gobi select	None	None	Fing BT	6 vPro	06/12
2325-2NU	i5-3320M	4GBx1	12.5" HD	No	320G 7200	Optional	Opt	None	6205	upg	None	None	No	6 vPro	06/12
2325-23U	i7-3520M	4GBx1	12.5" HD Prem	No	180G SSD	Optional	Opt	None	6300 ²⁸	upg	None	None	Fing BT	9 vPro G P	06/12
2325-22U	i5-3360M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	6205	upg	None	None	No	6 vPro G P	06/12
2325-5PU	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	DVD±RW	UltraB	None	6205	upg	None	Gemplus	Fing BT	6 vPro G P	07/12
2325-5NU	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	6205	upg	None	None	No	6 vPro G P	07/12
Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i5-3360M processor (dual-core, 2.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											Preloaded applications¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows			
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3														
mSATA™ SSD	None														
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)														
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)														
Keyboard TrackPoint®	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight														
Touchpad	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass														
ThinkLight™	UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³	<i>without UltraBase:</i> 4/6-cell: 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm														
Weight ²	<i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg)														
Case material	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy														
Standard Battery	Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery														
External Battery	None														
Battery - life ¹⁰	<i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr														
Chipset	Mobile Intel QM77 Express Chipset														
Ultrabase	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side)														
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)														
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)														
Smart Card Read Ports	<i>Some:</i> Gemplus Smart Card Reader in ExpressCard slot Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)														
PCle Mini Card	Two PCI Express Mini Card slots														
PCle WLAN ⁴	<i>Some:</i> 11a/b/g/n, PCle Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> 11a/b/g/n, PCle Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3														
PCle WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS														
Carrier	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider														
Modem	None														
Bluetooth™	<i>Some:</i> Bluetooth 4.0 wireless														
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant														
Security	<i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Security chip															
Fingerprint reader															
Limited warranty ¹²	3-years /1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available														

ThinkPad X230 (2325) - Onsite - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ^s	rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCle Mini Card WLAN	PCle Mini Card WWAN	Finger print reader	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load	Ann Date (mm/yy)
2325-5TU	i5-3320M	4GBx1	12.5" HD Prem	720p	320G	7200	DVD±RW	UltraB	None	Intel 6205 ²⁸	upg	Finger	6	vPro	G P	Pro 64	07/12
2325-3QU	i5-3320M	4GBx1	12.5" HD Prem	720p	320G	7200	Optional	Opt	None	Intel 6205	upg	Finger	6	vPro	G P	Pro 64	07/12
2325-5SU	i5-3320M	4GBx1	12.5" HD Prem	720p	500G	7200	DVD±RW	UltraB	None	Intel 6205	upg	Finger	6	vPro	G P	Pro 64	07/12
2325-5RU	i5-3320M	4GBx1	12.5" HD Prem	720p	500G	7200	Optional	Opt	None	Intel 6205	upg	Finger	6	vPro	G P	Pro 64	07/12

- **Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty**

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3	Preloaded applications ¹⁴ (only some listed) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows
mSATA™ SSD	None	Supports ThinkVantage® technologies
Widescreen display	(Premium) 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)	ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)	65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Keyboard	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight	
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg)	
Weight ²	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy	
Case material	Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery	
Standard Battery	None	
External Battery	None	
Battery - life ¹⁰	<i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr	
Chipset	Mobile Intel QM77 Express Chipset	
Ultrabase	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side)	
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)	
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)	
Smart Card Read	None	
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
PCIe WWAN	Wireless WAN upgradable	
Carrier	None	
Modem	None	
Bluetooth™	Bluetooth 4.0 wireless	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant	
Security	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Security chip		
Fingerprint reader		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	

See footnotes for more detailed information

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(DSH2-6) August 2012

ThinkPad X230 (2325) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ³ rpm	Optical in UltraBase	ThinkPad Series	Backlit key-board	PCIe Mini Card WLAN	Finger print reader	Blue-tooth	Bat-tery Intel AMT	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
2325-67U	i5-3320M	4GBx1	12.5" HD	No	320G 7200	Optional	Opt	None	Intel 2200	None	No	6 No	No	G P	Win8 Pro64	10/12
2325-66U	i7-3520M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	None	Intel 6205 ²⁸	Finger BT	6	iAMT vPro	G P	Win8 Pro64	10/12	
2325-65U	i7-3520M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	None	Intel 6205	Finger BT	6	iAMT vPro	G P	Win8 Pro64	10/12	
2325-64U	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	None	Intel 6205	Finger BT	6	iAMT vPro	G P	Win8 Pro64	10/12	
2325-63U	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	None	Intel 6205	Finger BT	6	iAMT vPro	G P	Win8 Pro64	10/12	
2325-62U	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	None	Intel 6205	Finger BT	6	iAMT vPro	G P	Win8 Pro64	10/12	
2325-8AU	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win7 Pro64	12/12	
2325-89U	i7-3520M	4GBx1	12.5" HD	720p	256G SSD	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win7 Pro64	12/12	
2325-88U	i7-3520M	4GBx1	12.5" HD Prem	720p	240G FDE SSD	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win7 Pro64	12/12	
2325-87U	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win7 Pro64	12/12	
2325-86U	i5-3320M	4GBx1	12.5" HD	720p	128G SSD	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win7 Pro64	12/12	
2325-85U	i5-3320M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win7 Pro64	12/12	
2325-AAU	i5-3320M	4GBx1	12.5" HD	720p	180G SSD	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win8 Pro64	02/13	
2325-A7U	i5-3320M	4GBx1	12.5" HD	720p	240G FDE SSD	Optional	Opt	Backlit	Intel 6205	Finger BT	6	iAMT vPro		Win8 Pro64	02/13	

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit					
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate					
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradeable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3															
mSATA™ SSD	None															
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)															
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus															
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)															
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions															
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None <i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr															
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Option:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)															
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 Wireless WAN upgradeable None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip															
Security Security chip Fingerprint reader																
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available															

See footnotes for more detailed information

US model(s) withdrawn effective February 2013

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(DSH2-9) February 2013

ThinkPad X230 (2325) - Onsite (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ^a rpm	Optical in UltraBase Series 3	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Bat- tery Intel vPro	Preload	Ann Date (mm/yy)
2325-BNU	i7-3520M	4GBx1	12.5" HD	720p	256G SSD	Optional	Opt	Backlit	Intel 6205 ²⁸	WWAN upg	BT 6 vPro	Win7 Pro64	07/13
2325-BMU	i7-3520M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	BT 6 vPro	Win7 Pro64	07/13
2325-BKU	i5-3320M	4GBx1	12.5" HD	720p	128G SSD	Optional	Opt	Backlit	Intel 6205	WWAN upg	BT 6 vPro	Win7 Pro64	07/13
2325-BJU	i5-3320M	4GBx1	12.5" HD	720p	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	BT 6 vPro	Win7 Pro64	07/13

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit		
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Power Manager - Windows 8 models • Lenovo Support • Lenovo Companion - All models • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate		
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3												
mSATA™ SSD	None												
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)										Supports ThinkVantage® technologies		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g		
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm <i>4-cell:</i> from 2.96 lb (1.34kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery None <i>4-cell (28.8Whr):</i> up to 4.6 hr; <i>6-cell (62.4Whr):</i> up to 10.3 hr; <i>9-cell (93.6Whr):</i> up to 15.5 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.6 hr; <i>9-cell plus external battery:</i> up to 26.1 hr												
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Option:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)												
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack												
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None												
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available										65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²		

See footnotes for more detailed information

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(DSH2-12) July 2013

ThinkPad X230 Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann	06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann	06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann	06/05/12

Ultrabay Slim 9.5mm

<i>Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3</i>			
Serial ATA Hard Drive 9.5mm Bay Adapter III	43N3412	ann	06/23/09
DVD ROM Ultrabay Slim Drive III	0A65628	ann	06/05/12
DVD Burner Ultrabay Slim Drive III	0A65626	ann	06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann	12/11/12
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65631	ann	06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65632	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65635	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm			
Self Encrypting (SED) OPAL Capable HDD ⁴¹	0A65636	ann	08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65629	ann	06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65630	ann	06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD ⁴¹	0A65620	ann	05/15/12

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 in ThinkPad Ultrabase Series 3

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ Mobile Broadband Option	0A36185	ann	04/12/11
ThinkPad Gobi 4000 Mobile Broadband - AT&T®	0A36320	ann	06/05/12
ThinkPad Gobi 4000 Mobile Broadband - Verizon®	0A36318	ann	06/26/12

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Ultrabase Series 3	0A33932	ann	03/01/11
ThinkPad Port Replicator Series 3 with USB 3.0	433615W	ann	06/05/12
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W	433715U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W	433815U	ann	06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann	06/05/12

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann	01/07/10
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Security

3M 12.5W Privacy Filter from Lenovo	0A61770	ann	04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 44 (4-cell)	0A36305	ann	06/05/12
ThinkPad Battery 44+ (6-cell)	0A36306	ann	06/05/12
ThinkPad Battery 44++ (9-cell)	0A36307	ann	06/05/12
ThinkPad Battery 19+ (6-cell, Slim External) ⁴³	0A36280	ann	03/01/11

⁴³ To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator, Ultrabase, or Docks)

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 12.5" widescreen models:

ThinkPad 12.5" Ultrabook Topload ⁷²	0B47416	ann	12/04/12
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⁷² Not compatible when using ThinkPad Battery 44++ (9-cell) 0A36307

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12

More information at www.lenovo.com/support/cases
Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09

⁶⁹ DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann	08/16/11

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann	08/14/12
Lenovo USB Soundbar	0A36190	ann	05/01/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann	07/24/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad X240



Lenovo ThinkPad X240



Lenovo ThinkPad X240



Lenovo ThinkPad X240



Lenovo ThinkPad X240

ThinkPad X240 Platform Specifications

Product Specifications Reference (PSREF)

Positioning	Ultraportable Ultrabook™ or Thinbook; one spindle								Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack	
Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor								WLAN ⁴	One of the following, configurable by model: <ul style="list-style-type: none">• ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 Card• Intel Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card• Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card	
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology	WWAN (optional)	One of the following, configurable by model (mutually exclusive with M.2 SSD): <ul style="list-style-type: none">• Wireless WAN upgradable• Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card
	i3-4010U	2	4	1.7 GHz	-	3MB	DDR3L-1600	Intel HD graphics 4400	No		
	i5-4200U			1.6 GHz	2.6 GHz	3MB			No		
	i5-4300U			1.9 GHz	2.9 GHz	3MB			Yes		
	i7-4600U			2.1 GHz	3.3 GHz	4MB			Yes		
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket								SIM card (optional)	One of the following, configurable by model: <ul style="list-style-type: none">• AT&T® or Verizon® LTE (4G), contract required with service provider• User selectable, contract required with service provider	
Optical SATA disk	None Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™								Bluetooth™ Ethernet	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication	
M.2 SSD	Some: Hybrid drive with 8GB NAND flash memory Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card								NFC	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models Fingerprint reader Optional: Fingerprint reader on the keyboard bezel, swipe sensor	
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio, TN Some: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080) TFT color, anti-glare, LED backlight, 400 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS								Security chip	Limited warranty ¹² One of the following, configurable by model: <ul style="list-style-type: none">• 1-year - depot repair service / service upgrades²² available• 3-years/1-yr battery - depot repair service / service upgrades available• 3-years/1-yr battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available For Lenovo service upgrade options, please go to S-TA sheet	
MultiTouch Camera (optional)	Some: Capacitive-type MultiTouch, supports ten-finger gesture HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus								Fingerprint reader		
Graphics	Intel HD Graphics 4400 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@30Hz (DP via mDP cable); 1920x1200@60Hz (VGA)								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">• Lenovo Solution Center• ThinkVantage Product Recovery• Rescue and Recovery™• ThinkVantage System Update• Lenovo Cloud Storage by SugarSync• PC Device Stage• Nitro Pro• Evernote®• Skype™• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security (30 days of virus definitions) Some: Windows 8 / 8.1 64-bit Some: Windows 8 / 8.1 Pro 64-bit <ul style="list-style-type: none">• Lenovo Solution Center• Lenovo Support• Lenovo Companion• ThinkVantage System Update• Lenovo Reach (Window 8.1 model)• Hightail - Metro (Window 8.1 model)• Lenovo Cloud Storage by SugarSync - Metro (Window 8 model)• Lenovo Cloud Storage by SugarSync (Window 8 model)• PC Device Stage• AccuWeather• Amazon Kindle• Nitro Pro• Evernote• Skype• Rara Streaming• Norton Studio• Microsoft Office preloaded; purchase a product key to activate• Norton Internet Security (30 days of virus definitions)	
Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch										
ThinkLight™	None										
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm										
Weight ²	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell						
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg						
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg						
Case material	Glass-Fiber Reinforced Plastic										
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication										
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication										
Battery - life ¹⁰	Battery configuration	3-cell + 3-cell	3-cell + 6-cell	47.5Wh	3-cell + 6-cell	72Wh					
	Battery life	8.7 hr	13.1 hr	17.4 hr							
AC adapter	45-watt AC adapter										
Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)										
Smart Card Read	Optional: Smart Card reader, exclusive with M.2 SSD										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector										
Environment	EPEAT™ Gold; ENERGY STAR® 5.0; GREENGUARD®; RoHS-compliant										

See footnotes for more detailed information

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(WV1-Spec) April 2014

ThinkPad X240 20AL (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AL008WUS	i5-4200U	4GBx1	12.5" HD	No	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	Finger	None	None	No+6 ²	Win7 P64 DG Win8	3-Depot	No	11/13
20AL008XUS	i5-4200U	4GBx1	12.5" HD	No	HD 4400	720p	500G 7200	Backlit	7260 b/g/n	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL008YUS	i5-4300U	4GBx1	12.5" HD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0090US	i5-4300U	4GBx1	12.5" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0091US	i5-4300U	8GBx1	12.5" HD IPS	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0092US	i7-4600U	8GBx1	12.5" HD IPS	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0093US	i7-4600U	4GBx1	12.5" HD	No	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0094US	i7-4600U	4GBx1	12.5" HD	No	HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0095US	i7-4600U	8GBx1	12.5" HD IPS	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0096US	i5-4300U	8GBx1	12.5" HD IPS	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0097US	i5-4300U	4GBx1	12.5" HD	No	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0098US	i5-4300U	4GBx1	12.5" HD	MT	HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win7 P64 DG Win8	3-Depot	No	11/13
20AL0099US	i5-4300U	4GBx1	12.5" HD	No	HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009AUS	i5-4300U	4GBx1	12.5" HD	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009BUS	i5-4300U	8GBx1	12.5" HD IPS	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009CUS	i7-4600U	8GBx1	12.5" HD IPS	No	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009DUS	i7-4600U	8GBx1	12.5" HD IPS	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009EUS	i5-4300U	8GBx1	12.5" HD IPS	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009FUS	i5-4300U	4GBx1	12.5" HD	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009GUS	i7-4600U	4GBx1	12.5" HD	No	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win7 P64 DG Win8	3-Depot	No	11/13
20AL009HUS	i5-4300U	4GBx1	12.5" HD	No	HD 4400	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win7 P64 DG Win8	3-Depot	No	11/13

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket				Smart Card Read	Optional: Smart Card reader			
Optical	None				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: Hybrid drive with 8GB NAND flash memory				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector			
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack			
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) , 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768) , 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080) , 400 nits, 700:1 contrast ratio, IPS Some: Capacitive-type MultiTouch, supports ten-finger gesture				WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card			
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture				WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS			
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider			
Graphics	Intel HD Graphics 4400 in processor				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight				Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)			
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				NFC	Optional: Near Field Communication			
ThinkLight™	None				Security	Power-on password, hard disk password, supervisor password, security keyhole			
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm				Security chip	Trusted Platform Module, TCG 1.2-compliant			
Weight ²	Models				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models			
	Non-MultiTouch				Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
	MultiTouch				Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit			
Case material	Glass-Fiber Reinforced Plastic				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication								
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication								
Battery - life ¹⁰	Battery configuration								
	3-cell + 3-cell								
	3-cell + 6-cell 47.5Wh								
	3-cell + 6-cell 72Wh								
	Battery life								
	8.7 hr								
	13.1 hr								
	17.4 hr								
AC adapter	45-watt AC adapter								

See footnotes for more detailed information

ThinkPad X240 20AL (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AL008GUS	i5-4200U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	500G 7200	None	7260 b/g/n	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	No	11/13
20AL008HUS	i5-4200U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	None	7260 b/g/n	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	No	11/13
20AL008JUS	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	No	11/13
20AL008KUS	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL008LUS	i7-4600U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL008MUS	i7-4600U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL008NUS	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL008PUS	i5-4300U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL008QUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL008RUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL008JUS	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL009KUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AL00D9US	i5-4200U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	No	03/14
20AL00D3US	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	No	03/14
20AL00D4US	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Depot	No	03/14
20AL00D5US	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	No	03/14
20AL00D7US	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	512G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	No	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)																
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket				Smart Card Read	<i>Optional:</i> Smart Card reader																
Optical	None				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																
SATA disk	<i>Some:</i> SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS <i>Some:</i> Hybrid drive with 8GB NAND flash memory				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector																
M.2 SSD	<i>Some:</i> Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader <i>Some:</i> Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack																
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) , 200 nits, 300:1 contrast ratio <i>Some:</i> 12.5" (317.5mm) HD (1366x768) , 300 nits, 700:1 contrast ratio, IPS <i>Some:</i> 12.5" (317.5mm) FHD (1920x1080) , 400 nits, 700:1 contrast ratio, IPS				WLAN ⁴	<i>TP 11b/g/n:</i> ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card <i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card																
MultiTouch	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture				WWAN <i>(optional)</i>	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS																
Camera <i>(optional)</i>	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				SIM card <i>(optional)</i>	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider																
Graphics	Intel HD Graphics 4400 in processor				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter																
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight				Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I218-V (Clarkville) <i>vPro model:</i> Intel Ethernet Connection I218-LM (Clarkville)																
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				NFC	<i>Optional:</i> Near Field Communication																
ThinkLight™	None				Security	Power-on password, hard disk password, supervisor password, security keyhole																
Dimensions ³	<i>12.5W" (WxDxH):</i> 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm <i>12.5W" MultiTouch (WxDxH):</i> 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm				Security chip	Trusted Platform Module, TCG 1.2-compliant																
Weight ²	<table><tr><td><i>Models</i></td><td><i>3-cell only</i></td><td><i>6-cell only</i></td><td><i>3-cell + 3-cell</i></td><td><i>3-cell + 6-cell</i></td></tr><tr><td><i>Non-MultiTouch</i></td><td>2.88 lb / 1.31kg</td><td>3.23 lb / 1.47kg</td><td>3.13 lb / 1.42kg</td><td>3.48 lb / 1.58kg</td></tr><tr><td><i>MultiTouch</i></td><td>-</td><td>-</td><td>3.29 lb / 1.49kg</td><td>3.64 lb / 1.65kg</td></tr></table>				<i>Models</i>	<i>3-cell only</i>	<i>6-cell only</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell</i>	<i>Non-MultiTouch</i>	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg	<i>MultiTouch</i>	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg	vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models	
<i>Models</i>	<i>3-cell only</i>	<i>6-cell only</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell</i>																		
<i>Non-MultiTouch</i>	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg																		
<i>MultiTouch</i>	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg																		
Case material	Glass-Fiber Reinforced Plastic				Fingerprint reader	<i>Optional:</i> Fingerprint reader on the keyboard bezel, swipe sensor																
Internal battery	<i>Optional:</i> Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication				Preload	<i>Win7 P64 DG Win8 / 8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit																
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication					<i>Win8 / 8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8 / 8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit																
Battery - life ¹⁰	<table><tr><td><i>Battery configuration</i></td><td><i>3-cell + 3-cell</i></td><td><i>3-cell + 6-cell 47.5Wh</i></td><td><i>3-cell + 6-cell 72Wh</i></td></tr><tr><td><i>Battery life</i></td><td>8.7 hr</td><td>13.1 hr</td><td>17.4 hr</td></tr></table>				<i>Battery configuration</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell 47.5Wh</i>	<i>3-cell + 6-cell 72Wh</i>	<i>Battery life</i>	8.7 hr	13.1 hr	17.4 hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite								
<i>Battery configuration</i>	<i>3-cell + 3-cell</i>	<i>3-cell + 6-cell 47.5Wh</i>	<i>3-cell + 6-cell 72Wh</i>																			
<i>Battery life</i>	8.7 hr	13.1 hr	17.4 hr																			
AC adapter	45-watt AC adapter																					

See footnotes for more detailed information

ThinkPad X240 20AM (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AM0014US	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	10/13
20AM0016US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Depot	Yes	10/13
20AM0019US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	10/13
20AM001BUS	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	10/13
20AM001CUS	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM001DUS	i7-4600U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	10/13
20AM001FUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Depot	Yes	10/13
20AM001JUS	i5-4300U	4GBx1	12.5" HD IPS		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Depot	Yes	10/13
20AM001KUS	i7-4600U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM001LUS	i7-4600U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Depot	Yes	10/13
20AM001QUS	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM001VUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM004LUS	i7-4600U	8GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM004MUS	i5-4300U	4GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM004FUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Depot	Yes	10/13
20AM004VUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM0053US	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM0054US	i5-4300U	8GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	Yes	10/13
20AM009FUS	i5-4300U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14
20AM009JUS	i5-4300U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14
20AM009KUS	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14
20AM009MUS	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket				Smart Card Read	Optional: Smart Card reader			
Optical	None				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: Hybrid drive with 8GB NAND flash memory Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector			
M.2 SSD					Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack			
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) , 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768) , 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080) , 400 nits, 700:1 contrast ratio, IPS Some: Capacitive-type MultiTouch, supports ten-finger gesture				WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card			
MultiTouch					WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS			
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider			
Graphics	Intel HD Graphics 4400 in processor				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight				Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville) Optional: Near Field Communication			
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				NFC				
ThinkLight™	None				Security	Power-on password, hard disk password, supervisor password, security keyhole			
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm				Security chip	Trusted Platform Module, TCG 1.2-compliant			
Weight ²					vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models			
	Models	3-cell only	6-cell only	3-cell + 3-cell	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit			
	MultiTouch	-	-	3.29 lb / 1.49kg	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
Case material	Glass-Fiber Reinforced Plastic								
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication								
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication								
Battery - life ¹⁰									
	Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh					
	Battery life	8.7 hr	13.1 hr	17.4 hr					
AC adapter	45-watt AC adapter								

See footnotes for more detailed information

ThinkPad X240 20AM (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AM004RUS	i5-4300U	8GBx1	12.5" HD IPS		HD 4400	720p	180G SSD	None	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM004YUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	Backlit	7260 ac	EM7355	select	Finger	None	16GB	3+3	Win8 P64	3-Depot	No	11/13
20AM0052US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	128G SSD	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM0057US	i5-4300U	8GBx1	12.5" HD		HD 4400	720p	180G SSD	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM0059US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	None	7260 ac	EM7355	select	Finger	None	None	No+6 ²	Win8 P64	3-Depot	No	11/13
20AM005AUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	180G SSD	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM005BUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM0060US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Depot	No	11/13
20AM0061US	i5-4300U	4GBx1	12.5" HD IPS		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM0062US	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM0066US	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM0069US	i7-4600U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM006AUS	i7-4600U	8GBx1	12.5" HD IPS		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM006FUS	i5-4300U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM006BUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Depot	No	11/13
20AM009PUS	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Depot	Yes	03/14
20AM009RUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14
20AM009UUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14
20AM009XUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14
20AM009YUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8.1 P64	3-Depot	Yes	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)			
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket				Smart Card Read	Optional: Smart Card reader			
Optical	None				Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: Hybrid drive with 8GB NAND flash memory				Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector			
M.2 SSD	Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack			
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) , 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768) , 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080) , 400 nits, 700:1 contrast ratio, IPS Some: Capacitive-type MultiTouch, supports ten-finger gesture				WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card			
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture				WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS			
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus				SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider			
Graphics	Intel HD Graphics 4400 in processor				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter			
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight				Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)			
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch				NFC	Optional: Near Field Communication			
ThinkLight™	None				Security	Power-on password, hard disk password, supervisor password, security keyhole			
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm				Security chip	Trusted Platform Module, TCG 1.2-compliant			
Weight ²					vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models			
	Models	3-cell only	6-cell only	3-cell + 3-cell	Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor			
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg					
	MultiTouch	-	-	3.29 lb / 1.49kg					
Case material	Glass-Fiber Reinforced Plastic				Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit			
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication					Win8 / 8.1 64: Windows 8 / 8.1 64-bit			
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication					Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit			
Battery - life ¹⁰									
	Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh					
	Battery life	8.7 hr	13.1 hr	17.4 hr					
AC adapter	45-watt AC adapter				Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			

See footnotes for more detailed information

ThinkPad X240 20AM (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AM0011US	i7-4600U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM0012US	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM0015US	i7-4600U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM001AUS	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM001HUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	128G SSD	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Onsite	Yes	10/13
20AM001MUS	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM001PUS	i7-4600U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Onsite	Yes	10/13
20AM001SUS	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM001UUS	i5-4300U	4GBx1	12.5" HD IPS		HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM001GUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+6 ¹	Win8 P64	3-Onsite IWS	Yes	10/13
20AM001NUS	i5-4300U	4GBx1	12.5" HD IPS		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite IWS	Yes	10/13
20AM001RUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8 P64	3-Onsite IWS	Yes	10/13
20AM001TUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Onsite IWS	Yes	10/13
20AM004PUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	180G SSD OPAL	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Onsite	Yes	10/13
20AM004QUS	i5-4300U	4GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM004WUS	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM004XUS	i5-4300U	8GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM0055US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM005CUS	i7-4600U	8GBx1	12.5" HD IPS		HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	Yes	10/13
20AM009GUS	i5-4300U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20AM009HUS	i5-4300U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20AM009LUS	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor								Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)									
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket								Smart Card Read	Optional: Smart Card reader									
Optical	None								Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS								Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector									
M.2 SSD	Some: Hybrid drive with 8GB NAND flash memory Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card								Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack									
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768), 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768), 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080), 400 nits, 700:1 contrast ratio, IPS Some: Capacitive-type MultiTouch, supports ten-finger gesture								WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card									
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture								WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS									
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus								SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider									
Graphics	Intel HD Graphics 4400 in processor								Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight								Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)									
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch								NFC	Optional: Near Field Communication									
ThinkLight™	None								Security	Power-on password, hard disk password, supervisor password, security keyhole									
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm								Security chip	Trusted Platform Module, TCG 1.2-compliant									
Weight ²	Models								vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models									
	Non-MultiTouch								Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor									
	MultiTouch								Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit Win8 / 8.1 64: Windows 8 / 8.1 64-bit Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit									
Case material	Glass-Fiber Reinforced Plastic								Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite									
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication																		
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication																		
Battery - life ¹⁰	Battery configuration																		
	3-cell + 3-cell																		
	3-cell + 6-cell 47.5Wh																		
	3-cell + 6-cell 72Wh																		
	Battery life																		
	8.7 hr																		
	13.1 hr																		
	17.4 hr																		
AC adapter	45-watt AC adapter																		

See footnotes for more detailed information

US model(s) withdrawn effective October 2013

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(WV1-2) March 2014

ThinkPad X240 20AM (Onsite) - Windows 8 - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Finger print reader	NFC	smart card reader/ M.2 SSD	battery cells (int+ext)	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20AM004NUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM004SUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	Backlit	7260 ac	EM7355	select	Finger	None	16GB	3+3	Win8 P64	3-Onsite	No	11/13
20AM004UUS	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	128G SSD	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM0050US	i5-4300U	8GBx1	12.5" HD IPS		HD 4400	720p	180G SSD	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM0051US	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	180G SSD	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM0056US	i5-4300U	8GBx1	12.5" HD		HD 4400	720p	180G SSD	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM0058US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	500G 7200	None	7260 ac	EM7355	select	Finger	None	None	No+6 ²	Win8 P64	3-Onsite	No	11/13
20AM0063US	i7-4600U	4GBx1	12.5" HD IPS		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM0064US	i5-4300U	4GBx1	12.5" HD IPS		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM0065US	i5-4300U	4GBx1	12.5" HD		HD 4400	720p	256G SSD eDrive	None	7260 ac	upg	None	Finger	None	None	No+6 ²	Win8 P64	3-Onsite	No	11/13
20AM0067US	i5-4300U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM0068US	i7-4600U	4GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM006BUS	i7-4600U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM006CUS	i7-4600U	8GBx1	12.5" HD IPS		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM006DUS	i5-4300U	8GBx1	12.5" HD IPS		HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM006EUS	i5-4300U	8GBx1	12.5" HD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8 P64	3-Onsite	No	11/13
20AM009NUS	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	128G SSD	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20AM009QUS	i5-4300U	4GBx1	12.5" FHD IPS	MT	HD 4400	720p	500G 7200	Backlit	7260 ac	upg	None	Finger	None	16GB	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20AM009SUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20AM009TUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	upg	None	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20AM009VUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	256G SSD eDrive	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14
20AM009WUS	i7-4600U	8GBx1	12.5" FHD IPS	MT	HD 4400	720p	180G SSD OPAL	Backlit	7260 ac	EM7355	select	Finger	None	None	3+3	Win8.1 P64	3-Onsite	Yes	03/14

6¹=6-cell 47.5Wh; 6²=6-cell 72Wh

• For detailed platform specifications, please see [ThinkPad X240 Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i3 / i5 / i7 Processor		Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)	
Memory	8GB max / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket		Smart Card Read	Optional: Smart Card reader	
Optical	None		Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
SATA disk	Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS Some: Hybrid drive with 8GB NAND flash memory Some: Single-sided M.2 SSD, via M.2 Card slot, exclusive with Smart Card reader Some: Double-sided M.2 SSD, via M.2 Card slot, exclusive with WWAN card		Ports	Two USB 3.0 (one Always On), VGA, Mini DP, ethernet (RJ-45), Dock connector	
M.2 SSD			Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 1.5W x 2 / dual array mic, combo audio/mic jack	
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) , 200 nits, 300:1 contrast ratio Some: 12.5" (317.5mm) HD (1366x768) , 300 nits, 700:1 contrast ratio, IPS Some: 12.5" (317.5mm) FHD (1920x1080) , 400 nits, 700:1 contrast ratio, IPS Some: Capacitive-type MultiTouch, supports ten-finger gesture		WLAN ⁴	TP 11b/g/n: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 Card 7260 b/g/n: Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 a/b/g/n: Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card 7260 ac: Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card	
MultiTouch			WWAN (optional)	upg: Wireless WAN upgradable EM7355: Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS	
Camera (optional)	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		SIM card (optional)	AT&T / Verizon: AT&T® / Verizon® LTE (4G), contract required with service provider select: User selectable, contract required with service provider	
Graphics	Intel HD Graphics 4400 in processor		Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight		Ethernet	Non-vPro model: Intel Ethernet Connection I218-V (Clarkville) vPro model: Intel Ethernet Connection I218-LM (Clarkville)	
UltraNav™	TrackPoint® pointing device and Mylar surface touchpad, integrated five buttons, multi-touch		NFC	Optional: Near Field Communication	
ThinkLight™	None		Security	Power-on password, hard disk password, supervisor password, security keyhole	
Dimensions ³	12.5W" (WxDxH): 12.0" x 8.21" x 0.78"; 305.5mm x 208.5mm x 19.9mm 12.5W" MultiTouch (WxDxH): 12.0" x 8.21" x 0.85"; 305.5mm x 208.5mm x 21.5mm		Security chip	Trusted Platform Module, TCG 1.2-compliant	
Weight ²			vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models	
	Models	3-cell only	6-cell only	3-cell + 3-cell	3-cell + 6-cell
	Non-MultiTouch	2.88 lb / 1.31kg	3.23 lb / 1.47kg	3.13 lb / 1.42kg	3.48 lb / 1.58kg
	MultiTouch	-	-	3.29 lb / 1.49kg	3.64 lb / 1.65kg
Case material	Glass-Fiber Reinforced Plastic		Fingerprint reader	Optional: Fingerprint reader on the keyboard bezel, swipe sensor	
Internal battery	Optional: Integrated Li-Ion or Li-Polymer 3-cell (23.5Wh), HW Authentication		Preload	Win7 P64 DG Win8 / 8.1: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit	
External battery	Li-Ion 3-cell (23.5Wh) or 6-cell (47.5Wh or 72Wh), HW Authentication			Win8 / 8.1 64: Windows 8 / 8.1 64-bit	
Battery - life ¹⁰				Win8 / 8.1 P64: Windows 8 / 8.1 Pro 64-bit	
	Battery configuration	3-cell + 3-cell	3-cell + 6-cell 47.5Wh	3-cell + 6-cell 72Wh	
	Battery life	8.7 hr	13.1 hr	17.4 hr	
AC adapter	45-watt AC adapter		Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	

See footnotes for more detailed information



Lenovo® ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet

ThinkPad X230 Tablet (3435) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁸ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Bat-tery Blue-tooth	Intel vPro	Pre-load	Ann date (mm/yy)		
3435-2YU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	Intel 6205 ²⁸	Gobi	select	BT	6	vPro	Pro 64	06/12
3435-2XU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	Intel 6205	Gobi	select	BT	6	vPro	Pro 64	06/12
3435-2WU	i7-3520M	4GBx2	12.5" HD <i>Multi</i>	720p	180G SSD	Optional	Opt	None	Intel 6205	upg	None	BT	6	vPro	Pro 64	06/12
3435-2VU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	DVD±RW	UltraB	None	Intel 6205	upg	None	BT	6	vPro	Pro 64	06/12
3435-2UU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205	upg	None	BT	6	vPro	Pro 64	06/12
3435-2TU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	500G 7200	DVD±RW	UltraB	None	Intel 6205	upg	None	BT	6	vPro	Pro 64	06/12
3435-2SU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	BT	6	vPro	Pro 64	06/12
3435-2RU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	DVD±RW	UltraB	None	Intel 6205	upg	None	BT	6	vPro	Pro 64	06/12
3435-2KU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205	upg	None	BT	6	vPro	Pro 64	06/12
• <i>Small and medium business (SMB) model(s), part of the US TopSeller™ Program</i> • <i>A depot repair service 3-year limited warranty</i>																
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager					
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows					
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3															
mSATA™ SSD	None															
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom															
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²					
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)															
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None															
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None <i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr															
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)															
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS <i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider															
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole															
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip															
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available															

See footnotes for more detailed information

ThinkPad X230 Tablet (3435) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ¹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger-print reader	Bat-tery cells	Intel vPro	Preload	Ann date (mm/yy)
3435-2JU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205 ²⁸	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-2HU	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	DVD±RW	UltraB	None	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-24U	i7-3520M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	None	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-22U	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	None	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-5HU	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12
3435-5GU	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12
3435-5AU	i5-3320M	4GBx1	12.5" HD Multi	720p	180G SSD	Optional	Opt	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12
3435-59U	i7-3520M	4GBx1	12.5" HD Multi	720p	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None		
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None <i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr		
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole		
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

ThinkPad X230 Tablet (3437)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ² rpm	Optical in UltraBase	ThinkPad Backlit Ultrabase Series 3	key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Bluetooth	Battery cells	Intel vPro	Global (G) Pre-load	Ann date (mm/yy)
3437-3LU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	6205 ²⁸	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-32U	i7-3520M	4GBx2	12.5" HD Out	720p	180G SSD	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2YU	i7-3520M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2XU	i5-3320M	4GBx1	12.5" HD Out	720p	500G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2WU	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2VU	i5-3320M	4GBx1	12.5" HD Mul	720p	500G 7200	DVD±RW	UltraB	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2UU	i7-3520M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2TU	i5-3320M	4GBx1	12.5" HD Out	720p	320G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2SU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2RU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	6205	Gobi select	BT	6	vPro	G	Pro 64 06/12	
3437-3KU	i7-3520M	4GBx1	12.5" HD Multi	720p	128G SSD	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 07/12
3437-2ZU	i5-3320M	4GBx1	12.5" HD Out	720p	128G SSD	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 07/12
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											Preloaded applications¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows				
Optical Ultrabay SATA disk	Some: DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3															
mSATA™ SSD	None															
Widescreen display	Outdoor: 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS MultiTouch: 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom															
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus															
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)											Supports ThinkVantage® technologies				
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None											ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632				
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	without UltraBase; 3-cell: 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm 3-cell: from 3.67 lb (1.66kg); 6-cell: from 3.97 lb (1.80kg) Display cover: Magnesium + PCABS; Bottom: Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None 3-cell (30Whr): up to 4.7 hr; 6-cell (66Whr): up to 9.9 hr; external battery (64Whr, 0A36280): up to 10.2 hr; 6-cell plus external battery: up to 20.1 hr											Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g				
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset Some: ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)															
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS															
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant															
Security Security chip Fingerprint reader	AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip											65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available															

See footnotes for more detailed information

ThinkPad X230 Tablet (3437) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁸ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger Card print reader	Blue-tooth	Bat-tery cells vPro	Global (G) Intel Pro GMP	Pre-load (P)	Ann date (mm/yy)
3437-2QU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	None	320G 7200	Optional	Opt	None	6205 ²⁸	upg	None	None	6	vPro	Pro 64	06/12
3437-2AU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	6205	upg	Fing	BT	6	vPro	Pro 64	06/12
3437-27U	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt	None	6205	upg	Fing	BT	6	vPro	Pro 64	06/12
3437-24U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	DVD±RW	UltraB	None	6205	upg	Fing	BT	6	vPro	Pro 64	06/12
3437-23U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	180G SSD	DVD±RW	UltraB	None	6205	upg	Fing	BT	6	vPro	Pro 64	06/12
3437-22U	i5-3320M	4GBx1	12.5" HD <i>Out</i>	720p	320G 7200	DVD±RW	UltraB	None	6205	upg	Fing	BT	6	vPro	Pro 64	06/12

• A depot repair service 3-year limited warranty

Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom <i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)		Supports ThinkVantage® technologies
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None		ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None <i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr		
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	Mobile Intel QM77 Express Chipset <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip		
Security Security chip Fingerprint reader			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

ThinkPad X230 Tablet (3438) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ¹ rpm	Optical in UltraBase Series 3	ThinkPad Backlit key-board	PCle Mini Card WLAN	PCle Mini Card WWAN	Finger-print reader	Bat-tery Blue-toothcells	Global (G) Intel vPro	Ann date (mm/yy)	
3438-3UU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205 ²⁸	upg	None	Fing BT	6 vPro G P	06/12
3438-3TU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro G P	06/12
3438-2UU	i7-3520M	4GBx2	12.5" HD Out	720p	180G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro	06/12
3438-2TU	i5-3320M	4GBx1	12.5" HD Out	720p	128G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro	06/12
3438-2SU	i5-3320M	4GBx1	12.5" HD Multi	720p	128G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro	06/12
3438-2QU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	Gobi select	Fing BT	6 vPro		06/12
3438-2PU	i5-3320M	4GBx1	12.5" HD Multi	No	320G 7200	Optional	Opt	None	Intel 6205	upg	None	No No	6 vPro	06/12
3438-2JU	i5-3320M	4GBx1	12.5" HD Out	720p	500G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro	06/12
3438-27U	i5-3320M	4GBx1	12.5" HD Out	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro G P	06/12
3438-26U	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro G P	06/12
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager			
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradeable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3										Preloaded applications¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows			
mSATA™ SSD	None													
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom													
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)													
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None										Supports ThinkVantage® technologies			
Dimensions ³ Weight ²	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg)										ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632			
Case material	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy													
Battery - type	Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery													
Extended Battery	None													
Battery - life ¹⁰	<i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr													
Chipset	Mobile Intel QM77 Express Chipset													
Ultrabase	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side)													
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)													
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)													
Smart Card Read	None													
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCle Mini Card	Two PCI Express Mini Card slots													
PCle WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2													
PCle WWAN	<i>Some:</i> Wireless WAN upgradeable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS													
Carrier	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider													
Modem	None													
Bluetooth™	<i>Some:</i> Bluetooth 4.0 wireless													
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1													
Intel AMT	Intel Active Management Technology (iAMT)													
Audio support	High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Fingerprint reader	<i>Some:</i> AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available										65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			

See footnotes for more detailed information

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ThinkPad X230 Tablet (3438) - Onsite - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB ² rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Bat-tery cells	Intel vPro	Global (G) (P)	Pre-load	Ann Date (mm/yy)
3438-25U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	500G 7200	Optional	Optional	None	Intel 6205 ²⁸	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-24U	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	500G 7200	Optional	Optional	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-23U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	180G SSD	DVD±RW	UltraBase	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-22U	i5-3320M	4GBx1	12.5" HD <i>Out</i>	320G 7200	DVD±RW	UltraBase	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-3SU	i5-3320M	4GBx1	12.5" HD <i>Out</i>	128G SSD	Optional	Optional	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	07/12
3438-2RU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	128G SSD	Optional	Optional	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	07/12

- **Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty**

Positioning Processor	<i>Convertible tablet ultraportable; one spindle</i> Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 <i>Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)</i> <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3													
mSATA™ SSD	None													
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)									Supports ThinkVantage® technologies				
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None									ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632 Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g				
Dimensions ³ Weight ²	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg)													
Case material	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy													
Battery - type	Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery													
Extended Battery	None													
Battery - life ¹⁰	<i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr													
Chipset Ultrabase	Mobile Intel QM77 Express Chipset													
Multicard Reader	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side)													
ExpressCard	4-in-1 reader (SD, SDHC, SDXC, MMC)													
Smart Card Read	One slot (ExpressCard/34, ExpressCard/54)													
Ports	None													
PCIe Mini Card	Two PCI Express Mini Card slots													
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2													
PCIe WWAN	Wireless WAN upgradable													
Carrier	None													
Modem	None													
Bluetooth™	Bluetooth 4.0 wireless													
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1													
Intel AMT	Intel Active Management Technology (iAMT)													
Audio support	High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Fingerprint reader	AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available									65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				

See footnotes for more detailed information

ThinkPad X230 Tablet Accessories

Product Specifications Reference (PSREF)

Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann	06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann	06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann	06/05/12

Ultrabay Slim 9.5mm

Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3			
Serial ATA Hard Drive 9.5mm Bay Adapter III	43N3412	ann	06/23/09
DVD ROM Ultrabay Slim Drive III	0A65628	ann	06/05/12
DVD Burner Ultrabay Slim Drive III	0A65626	ann	06/05/12

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann	12/11/12
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65631	ann	06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65632	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD ⁴¹	0A65635	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm			
Self Encrypting (SED) OPAL Capable HDD ⁴¹	0A65636	ann	08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65629	ann	06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive ⁴¹	0A65630	ann	06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD ⁴¹	0A65620	ann	05/15/12

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 in ThinkPad Ultrabase Series 3

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:			
ThinkPad Gobi™ Mobile Broadband Option	0A36185	ann	04/12/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Ultrabase Series 3	0A33932	ann	03/01/11

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann	01/07/10
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Tablet

ThinkPad Digitizer Pen	41U3143	ann	11/14/06
ThinkPad Tablet Tether (3-pack)	41U4820	ann	11/14/06

Batteries

ThinkPad Battery 67 (3-cell)	0A36316	ann	06/05/12
ThinkPad Battery 67+ (6-cell)	0A36317	ann	06/05/12
ThinkPad Battery 19+ (6-cell, Slim External) ⁴³	0A36280	ann	03/01/11

⁴³ To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using ThinkPad Ultrabase Series 3 0A33932)

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 12" widescreen models:

ThinkPad X220 Tablet Sleeve	0A33883	ann	03/22/11
ThinkPad 12.5" Ultrabook Topload	0B47416	ann	12/04/12

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12

More information at www.lenovo.com/support/cases

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09

⁶⁹ DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
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ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann	08/16/11
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More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann	08/14/12
Lenovo USB Soundbar	0A36190	ann	05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad X1 Carbon



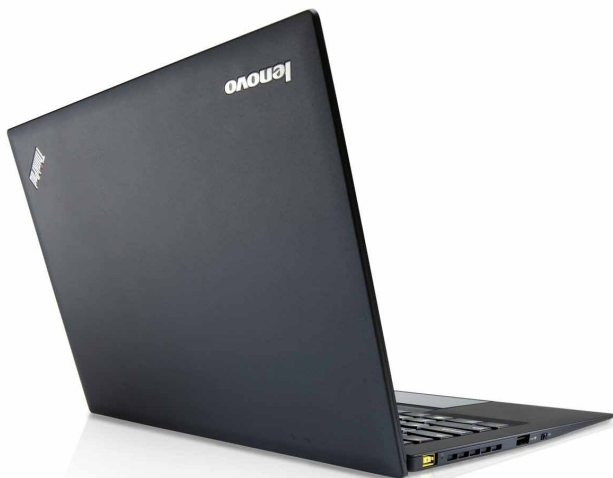
Lenovo ThinkPad X1 Carbon



Lenovo USB 2.0 Ethernet Adapter
0A36322



ThinkPad 90W AC Adapter for X1 Carbon
0B46994



Lenovo ThinkPad X1 Carbon



Lenovo ThinkPad X1 Carbon

ThinkPad X1 Carbon (3444) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ^a rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload (mm/yy)	Ann Date
3444-54U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S ²⁸	Ericsson	AT&T	Finger	BT	iAMT	vPro	Pro 64	08/12
3444-53U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	iAMT	vPro	Pro 64	08/12
3444-52U	i5-3317U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	None	None	Pro 64	08/12
3444-42U	i5-3317U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	None	None	Pro 64	08/12
3444-2KU	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	iAMT	vPro	Pro 64	08/12
3444-2HU	i5-3317U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	None	Pro 64	08/12
3444-2GU	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Pro 64	08/12
3444-2DU	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Pro 64	08/12
3444-28U	i7-3667U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Pro 64	08/12
3444-25U	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Pro 64	08/12
3444-BFU	i5-3427U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Pro 64	10/12
3444-BEU	i5-3427U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Pro 64	10/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Symantec™ VIP• Windows Live™ Essentials
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets		
Optical	None		
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>		
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm		
Weight ²	Integrated battery: from 3.0 lb (1.36kg)		
Case material	Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum		
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery		
Battery - life ¹⁰	Integrated battery (45.8Whr): up to 8.2 hr		
Chipset	Mobile Intel QS77 Express Chipset		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	None		
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)		
Monitor Cable	None		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2		
PCIe WWAN	<i>Some:</i> Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS		
Carrier	<i>Some:</i> AT&T®, contract required with service provider		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless		
Ethernet	None		
Intel AMT	<i>Some:</i> Intel Active Management Technology (iAMT)		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For compatible accessories, please go to O-X1-C sheet;		
For Lenovo service²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

US model(s) withdrawn effective December 2012 or March 2013

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(GS1-1) November 2012

ThinkPad X1 Carbon (3444) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
3444-BDU	i5-3427U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S ²⁸	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-BCU	i5-3427U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-B9U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-B8U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-B7U	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-AZU	i5-3317U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	None	Win7 Pro64	10/12
3444-59U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-55U	i5-3317U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	None	Win8 Pro64	10/12
3444-FGU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-FFU	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-FEU	i7-3667U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-FDU	i7-3667U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-FCU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-FBU	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-FAU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-F9U	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-F8U	i7-3667U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-F7U	i7-3667U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-BBU	i5-3427U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-BAU	i5-3427U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	10/12
3444-AWU	i5-3317U	4GBx1	14.0" HD	720p	120G SSD	Intel 6205S	None	None	Finger	BT	None	None	Win7 Pro64	10/12
3444-5AU	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
3444-56U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	10/12
Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit			
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets										Preloaded applications ⁵ (only some listed)			
Optical SATA disk mSATA™ SSD	None Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor None										- Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap			
Widescreen display	Some: 14.0" (355mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio										- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										- All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate			
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; Max external resolution: 2560x1600 (Mini-DisplayPort) @60Hz													
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch None													
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm Integrated battery: from 3.0 lb (1.36kg) Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum													
Battery - type Battery - life ¹⁰	Integrated Lithium Polymer 4-cell RapidCharge battery Integrated battery (45.8Whr): up to 8.2 hr													
Chipset Multicard reader ExpressCard Ports Monitor Cable	Mobile Intel QS77 Express Chipset 4-in-1 reader (SD, SDHC, SDXC, MMC) None One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort) None													
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2 Some: Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS										Supports ThinkVantage® technologies			
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Some: AT&T®, contract required with service provider None Bluetooth 4.0 wireless None Some: Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole, reset switch										90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole, reset switch Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip										For compatible accessories, please go to O-X1-C sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available													

ThinkPad X1 Carbon (3444) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
3444-GBU	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	Intel 6205S ²⁸	None	None	Finger	BT	iAMT	vPro	Win7 Pro64	02/13
3444-G9U	i5-3427U	4GBx1	14.0" HD	720p	128G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	02/13
3444-G8U	i5-3337U	4GBx1	14.0" HD	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	None	Win8 Pro64	02/13
3444-G7U	i5-3337U	4GBx1	14.0" HD	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	None	Win7 Pro64	02/13
3444-H3U	i5-3337U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	None	Win8 Pro64	04/13
3444-GYU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	Ericsson	selectable	Finger	BT	iAMT	vPro	Win7 Pro64	04/13
3444-GXU	i5-3427U	4GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	Ericsson	selectable	Finger	BT	iAMT	vPro	Win7 Pro64	04/13
3444-GVU	i5-3337U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	None	Win7 Pro64	04/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets		
Optical	None		
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor		
mSATA™ SSD	None		
Widescreen display	Some: 14.0" (355mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz		
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm		
Weight ²	Integrated battery: from 3.0 lb (1.36kg)		
Case material	Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum		
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery		
Battery - life ¹⁰	Integrated battery (45.8Whr): up to 8.2 hr		
Chipset	Mobile Intel QS77 Express Chipset		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	None		
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)		
Monitor Cable	None		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2		
PCIe WWAN	Some: Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS		
Carrier	Some: User selectable, contract required with service provider		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless		
Ethernet	None		
Intel AMT	Some: Intel Active Management Technology (iAMT)		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For compatible accessories, please go to O-X1-C sheet;		
For Lenovo service²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

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(GS1-10) April 2013

ThinkPad X1 Carbon (3444) - TopSeller (Windows 8) - MultiTouch

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
3444-CYU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S ²⁸	Ericsson	AT&T	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-CXU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-CWU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-CUU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-H2U	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	Ericsson	selectable	Finger	BT	iAMT	vPro	Win7 Pro64	04/13
3444-GZU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	Ericsson	selectable	Finger	BT	iAMT	vPro	Win7 Pro64	04/13
3444-HBU	i5-3337U	4GBx1	14.0" HD+ Multi	720p	128G SSD	Intel 6205S	None	None	Finger	BT	None	No	Win8 Pro64	07/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit		
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets			Preloaded applications ⁵ (only some listed)		
Optical	None			- Windows 7 models		
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor			• Lenovo® Message Center Plus		
mSATA™ SSD	None			• ThinkVantage Product Recovery		
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 400:1 contrast ratio, MultiTouch screen supports ten-finger gesture			• ThinkVantage Power Manager		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			• Lenovo SimpleTap		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>			- Windows 8 models		
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys			• Lenovo Support		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³			• Lenovo Companion		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch			• Lenovo QuickLaunch		
ThinkLight™	None			- All models		
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.39-0.82"; 331mm x 226mm x 10.0-20.8mm			• Lenovo Solution Center		
Weight ²	Integrated battery: from 3.4 lb (1.54kg)			• Password Manager		
Case material	Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum			• Fingerprint Software (fingerprint models)		
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery			• Lenovo Cloud Storage by SugarSync		
Battery - life ¹⁰	Integrated battery (45.8Whr): up to 8.2 hr			• Microsoft® Office preloaded; purchase a product key to activate		
Chipset	Mobile Intel QS77 Express Chipset			• Norton™ Internet Security (30 days of virus definitions)		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)					
ExpressCard	None					
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)					
Monitor Cable	None					
PCIe Mini Card	Two PCI Express Mini Card slots					
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2					
PCIe WWAN	Some: Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS			Supports ThinkVantage® technologies		
Carrier	Some: AT&T®, contract required with service provider Some: User selectable, contract required with service provider			90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²		
Modem	None					
Bluetooth™	Bluetooth 4.0 wireless					
Ethernet	None					
Intel AMT	Some: Intel Active Management Technology (iAMT)					
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack					
Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch					
Security chip	Trusted Platform Module, TCG 1.2-compliant			For compatible accessories, please go to O-X1-C sheet;		
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			For Lenovo service ²² upgrade options, please go to S-TA sheet		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available					

See footnotes for more detailed information

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(GS1-7) July 2013

ThinkPad X1 Carbon (3448)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Mini DP to VGA Cable	USB 2.0 Ethernet Adapter	Global (G) Intel vPro GMP (P)	Ann Date (mm/yy)
3448-3AU	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S ²⁸	Ericsson	AT&T	None	None	vPro	Pro 64 08/12
3448-39U	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	Ericsson	AT&T	mDP-VGA	Ethernet	vPro	Pro 64 08/12
3448-34U	i5-3427U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	None	None	vPro	Pro 64 08/12
3448-2MU	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	Ericsson	AT&T	None	None	vPro	Pro 64 08/12
3448-35U	i5-3427U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	None	None	vPro	Pro 64 08/12
3448-25U	i7-3667U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	None	None	vPro	Pro 64 08/12
3448-24U	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	None	None	vPro	Pro 64 08/12
3448-23U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	None	None	vPro	Pro 64 08/12
3448-22U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	None	None	vPro	Pro 64 08/12

• A depot repair service 3-year limited warranty

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Solution Center• Lenovo Message Center Plus• ThinkVantage Product Recovery• Access Connections™• Fingerprint Software (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• Lenovo Cloud Storage by SugarSync• Lenovo SimpleTap• Microsoft® Office preloaded; purchase a product key to activate• Norton™ Internet Security 2012 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Evernote®• Symantec™ VIP• Windows Live™ Essentials
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets			
Optical	None			
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor			
mSATA™ SSD	None			
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort) @60Hz</i>			
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³			
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch			
ThinkLight™	None			
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm			
Weight ²	<i>Integrated battery:</i> from 3.0 lb (1.36kg)			
Case material	<i>Display cover:</i> Carbon Fiber; <i>Bottom:</i> Magnesium/Aluminum			
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery			
Battery - life ¹⁰	<i>Integrated battery (45.8Whr):</i> up to 8.2 hr			
Chipset	Mobile Intel QS77 Express Chipset			
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)			
ExpressCard	None			
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)			
Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable (0A36536)			
PCIe Mini Card	Two PCI Express Mini Card slots			
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2			
PCIe WWAN	<i>Some:</i> Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS			
Carrier	<i>Some:</i> AT&T®, contract required with service provider			
Modem	None			
Bluetooth™	Bluetooth 4.0 wireless			
Ethernet	<i>Some:</i> Lenovo USB 2.0 Ethernet Adapter			
Intel AMT	Intel Active Management Technology (iAMT)			
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies
90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For compatible accessories, please go to O-X1-C sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US model(s) withdrawn effective December 2012

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(GS1-2) October 2012

ThinkPad X1 Carbon (3448) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
3448-5DU	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S ²⁸	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-5CU	i7-3667U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-5BU	i5-3427U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-5AU	i5-3427U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-59U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-58U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-95U	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	10/12
3448-94U	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	10/12
3448-AYU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-AXU	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-AWU	i7-3667U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-AVU	i7-3667U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	10/12
3448-BBU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3448-B8U	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3448-B6U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3448-B4U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3448-B3U	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	12/12
3448-B2U	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	12/12
3448-AZU	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	12/12
3448-CDU	i5-3427U	4GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win8 Pro64	02/13
3448-C4U	i5-3427U	4GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	02/13
3448-C3U	i5-3427U	4GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	02/13
3448-C2U	i5-3427U	4GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	02/13
3448-CWU	i5-3427U	4GBx1	14.0" HD+	720p	120G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	03/14

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Ultralight, durable, secure, and stylish Ultrabook™; one spindle</i> Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets	
Optical	None	
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor	
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>	
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³	
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	<i>14.0W" (WxDxH):</i> 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm	
Weight ²	<i>Integrated battery:</i> from 3.0 lb (1.36kg)	
Case material	<i>Display cover:</i> Carbon Fiber; <i>Bottom:</i> Magnesium/Aluminum	
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery	
Battery - life ¹⁰	<i>Integrated battery (45.8Whr):</i> up to 8.2 hr	
Chipset	Mobile Intel QS77 Express Chipset	
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)	
ExpressCard	None	
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)	
Monitor Cable	None	
PCIe Mini Card	Two PCI Express Mini Card slots	
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2	
PCIe WWAN	<i>Some:</i> Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS	
Carrier	<i>Some:</i> AT&T®, contract required with service provider	
Modem	None	
Bluetooth™	Bluetooth 4.0 wireless	
Ethernet	None	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

US model(s) withdrawn effective December 2012

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(GS1-5) March 2014

ThinkPad X1 Carbon (3448) - Windows 8 (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
3448-8SU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S ²⁸	None	None	Finger	BT	vPro	G	Win8 Pro64	12/12
3448-8RU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	12/12
3448-7PU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	12/12
3448-7NU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	12/12
3448-7MU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	12/12
3448-7FU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	12/12
3448-C8U	i7-3667U	8GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	02/13
3448-C7U	i7-3667U	8GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	02/13
3448-C6U	i7-3667U	8GBx1	14.0" HD+ Multi	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	02/13
3448-C5U	i7-3667U	8GBx1	14.0" HD+ Multi	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G	Win8 Pro64	02/13
3448-CXU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	120G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	03/14

• A depot repair service 3-year limited warranty

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets		
Optical	None		
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 400:1 contrast ratio, MultiTouch screen supports ten-finger gesture		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>		
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.39-0.82"; 331mm x 226mm x 10.0-20.8mm		
Weight ²	Integrated battery: from 3.4 lb (1.54kg)		
Case material	Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum		
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery		
Battery - life ¹⁰	Integrated battery (45.8Whr): up to 8.2 hr		
Chipset	Mobile Intel QS77 Express Chipset		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	None		
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)		
Monitor Cable	None		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2		
PCIe WWAN	Some: Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS		
Carrier	Some: AT&T®, contract required with service provider		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless		
Ethernet	None		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For compatible accessories, please go to O-X1-C sheet;		
For Lenovo service²² upgrade options, please go to S-TA sheet		

See footnotes for more detailed information
 US model(s) withdrawn effective January 2013

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 (GS1-8) March 2014

ThinkPad X1 Carbon (3460) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
3460-37U	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S ²⁸	Ericsson	AT&T	Finger	BT	vPro		Pro 64	08/12
3460-36U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Pro 64	08/12
3460-35U	i5-3427U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Pro 64	08/12
3460-34U	i5-3427U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Pro 64	08/12
3460-25U	i7-3667U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Pro 64	08/12
3460-24U	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Pro 64	08/12
3460-23U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Pro 64	08/12
3460-22U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Pro 64	08/12

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	<i>Ultralight, durable, secure, and stylish Ultrabook™; one spindle</i> Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications¹⁴ (only some listed) • Lenovo® Solution Center • Lenovo Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • Lenovo Cloud Storage by SugarSync • Lenovo SimpleTap • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Symantec™ VIP • Windows Live™ Essentials				
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets														
Optical	None														
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor														
mSATA™ SSD	None														
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio														
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort) @60Hz</i>														
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys														
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³														
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch														
ThinkLight™	None														
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm														
Weight ²	Integrated battery: from 3.0 lb (1.36kg)														
Case material	Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum														
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery														
Battery - life ¹⁰	Integrated battery (45.8Whr): up to 8.2 hr														
Chipset	Mobile Intel QS77 Express Chipset														
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)														
ExpressCard	None														
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)														
Monitor Cable	None														
PCIe Mini Card	Two PCI Express Mini Card slots														
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2														
PCIe WWAN	<i>Some:</i> Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS <i>Some:</i> AT&T®, contract required with service provider														
Carrier															
Modem	None														
Bluetooth™	Bluetooth 4.0 wireless														
Ethernet	None														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole, reset switch														
Security	Trusted Platform Module, TCG 1.2-compliant														
Security chip	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Fingerprint reader															
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available														

See footnotes for more detailed information
 US model(s) withdrawn effective December 2012

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 (GS1-3) October 2012

ThinkPad X1 Carbon (3460) - Onsite (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
3460-5CU	i7-3667U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S ²⁸	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-5DU	i7-3667U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-5BU	i5-3427U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-5AU	i5-3427U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-59U	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-58U	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-B2U	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	10/12
3460-AZU	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	10/12
3460-AYU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-AXU	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-AWU	i7-3667U	8GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-AVU	i7-3667U	8GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	10/12
3460-BQU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3460-BPU	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3460-BNU	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3460-BGU	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win7 Pro64	12/12
3460-BFU	i7-3667U	8GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	12/12
3460-BEU	i7-3667U	8GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	12/12
3460-BDU	i5-3427U	4GBx1	14.0" HD+	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	12/12
3460-BRU	i5-3427U	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	01/13
3460-CHU	i5-3427U	4GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	02/13
3460-CFU	i5-3427U	4GBx1	14.0" HD+	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win8 Pro64	02/13
3460-CBU	i5-3427U	4GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	02/13
3460-CAU	i5-3427U	4GBx1	14.0" HD+	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	02/13
3460-DSU	i5-3427U	4GBx1	14.0" HD+	720p	120G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	03/14
Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit			
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets										Preloaded applications ⁵ (only some listed) - Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate			
Optical	None													
SATA disk mSATA™ SSD	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor None													
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 400:1 contrast ratio													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz													
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³													
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions ³	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm													
Weight ²	Integrated battery: from 3.0 lb (1.36kg)													
Case material	Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum													
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery													
Battery - life ¹⁰	Integrated battery (45.8Whr): up to 8.2 hr													
Chipset	Mobile Intel QS77 Express Chipset													
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)													
ExpressCard	None													
Ports	One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort)													
Monitor Cable	None													
PCIe Mini Card	Two PCI Express Mini Card slots													
PCIe WLAN ⁴	11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2													
PCIe WWAN	Some: Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS													
Carrier	Some: AT&T®, contract required with service provider													
Modem	None													
Bluetooth™	Bluetooth 4.0 wireless													
Ethernet	None													
Intel AMT	Intel Active Management Technology (iAMT)													
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole, reset switch													
Security	Trusted Platform Module, TCG 1.2-compliant													
Security chip	Power On Authentication, supports the security chip													
Fingerprint reader	AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available										Supports ThinkVantage® technologies 90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For compatible accessories, please go to O-X1-C sheet; For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

US model(s) withdrawn effective December 2012

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(GS1-6) March 2014

ThinkPad X1 Carbon (3460) - Onsite (Windows 8) - MultiTouch

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
3460-AMU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S ²⁸	None	None	Finger	BT	vPro	G P	Win8 Pro64	12/12
3460-ALU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	12/12
3460-9WU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	12/12
3460-9VU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	12/12
3460-9UU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	12/12
3460-9TU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	vPro		Win8 Pro64	12/12
3460-9SU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	12/12
3460-9RU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	12/12
3460-CGU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	256G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	02/13
3460-CEU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	02/13
3460-CDU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	180G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	02/13
3460-CCU	i7-3667U	8GBx1	14.0" HD+ Multi	720p	128G SSD	Intel 6205S	None	None	Finger	BT	vPro	G P	Win8 Pro64	02/13
3460-DTU	i5-3427U	4GBx1	14.0" HD+ Multi	720p	120G SSD	Intel 6205S	None	None	Finger	BT	vPro		Win7 Pro64	03/14

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit			
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets										Preloaded applications ⁵ (only some listed)			
Optical SATA disk mSATA™ SSD	None Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor None										- Windows 7 models • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap			
Widescreen display	14.0" (355mm) HD+ (1600x900) TFT color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 400:1 contrast ratio, MultiTouch screen supports ten-finger gesture										- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										- All models • Lenovo Solution Center • Password Manager • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)			
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz										Supports ThinkVantage® technologies			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch None										90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (bottom cover) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.0" x 8.9" x 0.39-0.82"; 331mm x 226mm x 10.0-20.8mm Integrated battery: from 3.4 lb (1.54kg) Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum										For compatible accessories, please go to O-X1-C sheet;			
Battery - type Battery - life ¹⁰	Integrated Lithium Polymer 4-cell RapidCharge battery Integrated battery (45.8Whr): up to 8.2 hr										For Lenovo service ²² upgrade options, please go to S-TA sheet			
Chipset Multicard reader ExpressCard Ports Monitor Cable	Mobile Intel QS77 Express Chipset 4-in-1 reader (SD, SDHC, SDXC, MMC) None One USB 3.0, one powered USB 2.0, external monitor (Mini DisplayPort) None													
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Small Form Factor Mini Card, Intel Centrino® Advanced-N 6205S, 2x2 Some: Wireless WAN, Ericsson® H5321gw Mobile Broadband Module, PCIe Half Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS													
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Some: AT&T®, contract required with service provider None Bluetooth 4.0 wireless None Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 2 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole, reset switch													
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available													

See footnotes for more detailed information

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ThinkPad X1 Carbon Accessories

Product Specifications Reference (PSREF)

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

ThinkPad Expansion

USB 2.0 Port Replicator with Digital Video	0A33942	ann 03/22/11
ThinkPad USB 3.0 Dock	0A33970	ann 05/15/12
Lenovo Essential Notebook Stand	45J9292	ann 05/12/09

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	0A36407	ann 06/26/12
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann 01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Ethernet

Lenovo USB 2.0 Ethernet Adapter	0A36322	ann 08/14/12
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Security

3M 14.0W Privacy Filter from Lenovo	0A61769	ann 04/05/11
3M 14.0W Privacy Filter from Lenovo for X1 and X1 Carbon Touch ⁷⁴	4Z10A22782	ann 03/26/13
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁷⁴ Only compatible with ThinkPad X1 Carbon MultiTouch models.

Power Adapters

ThinkPad 90W AC Adapter for X1 Carbon	0B46994	ann 08/14/12
90W Ultralim AC/DC Combo Adapter ⁷⁰	41R4493	ann 09/22/09

⁷⁰ Requires the *Lenovo Slim Power Tip* 0B47048

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

•Lenovo Slim Power Tip 0B47048 ann 08/14/12

More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:

14W Ultrabook Topload & Small Sleeve Set - Black	0B95758	ann 08/07/12
14W Ultrabook Topload & Small Sleeve Set - Brown	0B95757	ann 08/07/12
14W Ultrabook Topload & Standard Sleeve Set - Black	0B95750	ann 08/07/12
14W Ultrabook Topload & Standard Sleeve Set - Brown	0B95751	ann 08/07/12

Up to 15.6" widescreen models:

ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
Lenovo Sport Backpack - Red	0A33896	ann 02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann 02/28/12
Lenovo Sport Messenger - Red	0A33898	ann 02/28/12

More information at www.lenovo.com/support/cases

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors⁶⁴

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann 08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann 08/16/11

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo USB-to-DVI/VGA Monitor Adapter	0B47072	ann 08/14/12
Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann 05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann 06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann 07/24/12
Lenovo USB Soundbar	0A36190	ann 05/01/12
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® New ThinkPad X1 Carbon



Lenovo New ThinkPad X1 Carbon



Lenovo New ThinkPad X1 Carbon



Lenovo New ThinkPad X1 Carbon



Lenovo New ThinkPad X1 Carbon

New ThinkPad X1 Carbon Platform Specifications

Product Specifications Reference (PSREF)

Processor	4th Generation Intel® Core™ i5 / i7 Processor									Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)		
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	Processor Graphics	Intel vPro Technology	Smart Card Reader	None		
	i5-4200U	2	4	1.6 GHz	2.6 GHz	3MB	DDR3L-1600	Intel HD 4400	No	Multicard Reader	None		
	i5-4300U			1.9 GHz	2.9 GHz	3MB		Intel HD 4400	Yes	Ports	Two USB 3.0 (one Always On), Mini DP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)		
	i7-4550U			1.5 GHz	3 GHz	4MB		Intel HD 5000	No	Monitor Cable	Some: Mini DisplayPort to VGA Monitor Cable		
	i7-4600U			2.1 GHz	3.3 GHz	4MB		Intel HD 4400	Yes	WLAN ⁴	One of the following, configurable by model: • Intel Wireless-N 7260, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 Card • Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card • Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT combo adapter, M.2 Card		
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets										WWAN (optional)	One of the following, configurable by model: • Wireless WAN upgradable • Wireless WAN, Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/HSPA+/EVDO/GSM/GPRS/EDGE, GPS, M.2 Card	
Optical Storage	None M.2 Solid State Drive (SSD)										SIM card (optional)	One of the following, configurable by model: • AT&T® or Verizon® LTE (4G), contract required with service provider • User selectable, contract required with service provider	
Widescreen display	Some: 14.0" (355mm) HD+ (1600x900) TFT color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) WQHD (2560x1440) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS , 170° viewing angle										Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	
MultiTouch	Some: Capacitive-type MultiTouch, supports ten-finger gesture, 270 nits										Ethernet	Ethernet Extension cable	
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input										NFC	Optional: Near Field Communication	
Ambient Light sensor	Ambient Light Sensor (Windows 8.1 64-bit only)										Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch	
Graphics	Intel HD Graphics 4400 or 5000 in processor, external digital monitor support via Mini DisplayPort or HDMI™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable); supports three independent displays; Max external resolution: 3840x2160 (Mini DisplayPort) @30Hz; 2880x1620 (HDMI) @60Hz										Security chip vPro & iAMT	Trusted Platform Module, TCG 1.2-compliant vPro and Intel Active Management Technology (iAMT) support on selected models	
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit										Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor	
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch										Limited warranty ¹²	One of the following, configurable by model: • 1-year - depot repair service / service upgrades ²² available • 3-years/1-yr battery - depot repair service / service upgrades available • 3-years/1-yr battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available For Lenovo service upgrade options, please go to S-TA sheet	
ThinkLight™	None										Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit	Some: Windows 8.1 64-bit
Dimensions ³	WQHD (WxDxH):			13.03" x 8.92" x 0.70";			331.0mm x 226.5mm x 17.72mm				rights in Windows 8.1 Pro 64-bit	Some: Windows 8.1 Pro 64-bit	
	HD+ (WxDxH):			13.03" x 8.93" x 0.71";			331.0mm x 226.8mm x 18.16mm						
	WQHD Touch (WxDxH):			13.03" x 8.94" x 0.73";			331.0mm x 227.1mm x 18.46mm						
Weight ²	Models		WQHD		HD+		WQHD Touch						
	Weight		2.82 lb / 1.28kg		2.96 lb / 1.34kg		3.15 lb / 1.43kg						
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum												
Battery - type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery												
Battery - life ¹⁰	Integrated battery: up to 9 hr												
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter												
RapidCharge	AC Adapter		45W		65W Slim		65W						
	Charge to 80%		1.0hr		50min		50min						
	Charge to 100%		2.3hr		2.1hr		2.1hr						
Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, voice input support, combo audio/microphone jack										Environment	ENERGY STAR® 6.0; RoHS-compliant	

See footnotes for more detailed information

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(MQ1-Spec) February 2014

New ThinkPad X1 Carbon 20A7 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN	SIM card	Finger print reader	NFC	mDP-VGA Cable	Power Adpt	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20A7002FUS	i5-4200U	4GBx1	14" HD+	No	Intel HD 4400	720p	128G SSD	7260 b/g/n	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002HUS	i5-4200U	4GBx1	14" HD+	No	Intel HD 4400	720p	256G SSD eDrive	7260 b/g/n	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002JUS	i5-4300U	4GBx1	14" HD+	No	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002LUS	i5-4300U	8GBx1	14" HD+	No	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002NUS	i5-4300U	4GBx1	14" HD+	No	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002QUS	i7-4600U	8GBx1	14" HD+	No	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002SUS	i7-4600U	8GBx1	14" HD+	No	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002UUS	i7-4600U	8GBx1	14" WQHD	No	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002WUS	i7-4600U	8GBx1	14" WQHD	No	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A7002YUS	i5-4300U	4GBx1	14" WQHD	No	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A70031US	i5-4300U	4GBx1	14" WQHD	No	Intel HD 5000	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14
20A70033US	i5-4300U	8GBx1	14" WQHD	No	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win7 P64 DG 8.1	3-Depot	No	01/14

• For detailed platform specifications, please see [New ThinkPad X1 Carbon Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, voice input support, combo audio/microphone jack														
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)														
Optical Storage	None M.2 Solid State Drive (SSD)				Smart Card Read	None														
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio <i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS				Multicard Reader	None														
MultiTouch	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture, 270 nits				Ports	Two USB 3.0 (one Always On), Mini DP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)														
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input				Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable														
Light sensor	Ambient Light Sensor (Windows 8.1 64-bit only)				WLAN ⁴	<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card														
Graphics	Intel HD Graphics 4400 or 5000				WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE / HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit				SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider														
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
ThinkLight™	None				Ethernet	Ethernet Extension cable <i>Optional:</i> Near Field Communication														
Dimensions ³	<i>WQHD (WxDxH):</i> 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm <i>HD+ (WxDxH):</i> 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm <i>WQHD Touch (WxDxH):</i> 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm				NFC	<i>Optional:</i> Near Field Communication														
Weight ²	<table><tr><td><i>Models</i></td><td><i>WQHD</i></td><td><i>HD+</i></td><td><i>WQHD Touch</i></td></tr><tr><td><i>Weight</i></td><td>2.82 lb / 1.28kg</td><td>2.96 lb / 1.34kg</td><td>3.15 lb / 1.43kg</td></tr></table>				<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>	<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg	Security	Power-on / hard disk / supervisor password, security keyhole, reset switch						
<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>																	
<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg																	
Case material	<i>Display cover:</i> Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum				Security chip	Trusted Platform Module, TCG 1.2-compliant														
Battery - type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models														
Battery - life ¹⁰	<i>Integrated battery:</i> up to 9 hr				Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor														
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter				Preload	<i>Win7 P64 DG Win8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit														
RapidCharge	<table><tr><td><i>AC Adapter</i></td><td><i>45W</i></td><td><i>65W Slim</i></td><td><i>65W</i></td></tr><tr><td><i>Charge to 80%</i></td><td>1.0hr</td><td>50min</td><td>50min</td></tr><tr><td><i>Charge to 100%</i></td><td>2.3hr</td><td>2.1hr</td><td>2.1hr</td></tr></table>				<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>	<i>Charge to 80%</i>	1.0hr	50min	50min	<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>																	
<i>Charge to 80%</i>	1.0hr	50min	50min																	
<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr																	

See footnotes for more detailed information

New ThinkPad X1 Carbon 20A7 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN	SIM card	Finger print reader	NFC	MDP-VGA Cable	Power Adpt	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20A70035US	i5-4300U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A70037US	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A70039US	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7003BUS	i5-4300U	4GBx1	14" WQHD	MT	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7003DUS	i5-4300U	4GBx1	14" WQHD	MT	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7003EUS	i5-4300U	4GBx1	14" WQHD		Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7003GUS	i5-4300U	4GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7003JUS	i5-4300U	8GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7003LUS	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7003PUS	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A7006FUS	i7-4550U	8GBx1	14" WQHD	MT	Intel HD 5000	720p	128G SSD	7260 ac	None	None	Finger	None	None	65W	Win8.1 64	1-Depot	No	02/14
20A7006DUS	i5-4200U	4GBx1	14" WQHD	MT	Intel HD 4400	720p	128G SSD	7260 ac	None	None	Finger	None	None	65W	Win8.1 64	1-Depot	No	02/14
20A7006TUS	i5-4200U	4GBx1	14" WQHD	MT	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	1-Depot	No	03/14
20A7006RUS	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	1-Depot	No	03/14
20A7006VUS	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	512G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	03/14

• For detailed platform specifications, please see [New ThinkPad X1 Carbon Platform Specifications sheet](#)

Processor	4th Generation Intel® Core™ i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, voice input support, combo audio/microphone jack														
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)														
Optical Storage	None M.2 Solid State Drive (SSD)				Smart Card Read	None														
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio				Multicard Reader	None														
MultiTouch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS				Ports	Two USB 3.0 (one Always On), Mini DP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)														
Camera	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture, 270 nits				Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable														
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input				WLAN ⁴	<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card														
Graphics	Intel HD Graphics 4400 or 5000				WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit				SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider														
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
ThinkLight™	None				Ethernet	Ethernet Extension cable														
Dimensions ³	<i>WQHD (WxDxH):</i> 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm <i>HD+ (WxDxH):</i> 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm <i>WQHD Touch (WxDxH):</i> 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm				NFC	<i>Optional:</i> Near Field Communication														
Weight ²	<table><tr><td><i>Models</i></td><td><i>WQHD</i></td><td><i>HD+</i></td><td><i>WQHD Touch</i></td></tr><tr><td><i>Weight</i></td><td>2.82 lb / 1.28kg</td><td>2.96 lb / 1.34kg</td><td>3.15 lb / 1.43kg</td></tr></table>				<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>	<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg	Security	Power-on / hard disk / supervisor password, security keyhole, reset switch						
<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>																	
<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg																	
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum				Security chip	Trusted Platform Module, TCG 1.2-compliant														
Battery - type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models														
Battery - life ¹⁰	Integrated battery: up to 9 hr				Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor														
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter				Preload	<i>Win7 P64 DG Win8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit														
RapidCharge	<table><tr><td><i>AC Adapter</i></td><td><i>45W</i></td><td><i>65W Slim</i></td><td><i>65W</i></td></tr><tr><td><i>Charge to 80%</i></td><td>1.0hr</td><td>50min</td><td>50min</td></tr><tr><td><i>Charge to 100%</i></td><td>2.3hr</td><td>2.1hr</td><td>2.1hr</td></tr></table>				<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>	<i>Charge to 80%</i>	1.0hr	50min	50min	<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>																	
<i>Charge to 80%</i>	1.0hr	50min	50min																	
<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr																	

See footnotes for more detailed information

New ThinkPad X1 Carbon 20A8 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen Multi-display touch	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN	SIM card	Finger print reader	NFC	mDP-VGA Cable	Power Adapter	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20A8001CUS	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001GUS	i7-4600U	8GBx1	14" HD+	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001PUS	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001QUS	i7-4600U	8GBx1	14" WQHD <i>MT</i>	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001SUS	i7-4600U	8GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001TUS	i5-4300U	4GBx1	14" HD+	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A80021US	i5-4300U	4GBx1	14" HD+	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A80022US	i5-4300U	4GBx1	14" WQHD <i>MT</i>	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A80023US	i5-4300U	4GBx1	14" WQHD <i>MT</i>	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001FUS	i7-4600U	8GBx1	14" WQHD <i>MT</i>	Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001NUS	i7-4600U	8GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8001RUS	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A80024US	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	128G SSD	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Depot	No	01/14
20A8002KUS	i5-4300U	8GBx1	14" HD+	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002TUS	i7-4600U	8GBx1	14" WQHD <i>MT</i>	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002UUS	i5-4300U	4GBx1	14" HD+	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002WUS	i5-4300U	8GBx1	14" WQHD	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80033US	i5-4300U	8GBx1	14" WQHD <i>MT</i>	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80036US	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14

• For detailed platform specifications, please see [New ThinkPad X1 Carbon Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, voice input support, combo audio/microphone jack															
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)															
Optical Storage	None M.2 Solid State Drive (SSD)				Smart Card Read	None															
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio				Multicard Reader	None															
MultiTouch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS				Ports	Two USB 3.0 (one Always On), Mini DP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)															
Camera	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture, 270 nits				Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable															
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input				WLAN ⁴	<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card															
Graphics	Intel HD Graphics 4400 or 5000				WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS															
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit				SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider															
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter															
ThinkLight™	None				Ethernet	Ethernet Extension cable															
Dimensions ³	<i>WQHD (WxDxH):</i> 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm <i>HD+ (WxDxH):</i> 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm <i>WQHD Touch (WxDxH):</i> 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm				NFC	<i>Optional:</i> Near Field Communication															
Weight ²	<table><tr><td><i>Models</i></td><td><i>WQHD</i></td><td><i>HD+</i></td><td><i>WQHD Touch</i></td></tr><tr><td><i>Weight</i></td><td>2.82 lb / 1.28kg</td><td>2.96 lb / 1.34kg</td><td>3.15 lb / 1.43kg</td></tr></table>				<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>	<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg	Security	Power-on / hard disk / supervisor password, security keyhole, reset switch							
<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>																		
<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg																		
Case material	<i>Display cover:</i> Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum				Security chip	Trusted Platform Module, TCG 1.2-compliant															
Battery - type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models															
Battery - life ¹⁰	<i>Integrated battery:</i> up to 9 hr				Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor															
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter				Preload	<i>Win7 P64 DG Win8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit															
RapidCharge	<table><tr><td><i>AC Adapter</i></td><td><i>45W</i></td><td><i>65W Slim</i></td><td><i>65W</i></td></tr><tr><td><i>Charge to 80%</i></td><td>1.0hr</td><td>50min</td><td>50min</td></tr><tr><td><i>Charge to 100%</i></td><td>2.3hr</td><td>2.1hr</td><td>2.1hr</td></tr></table>				<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>	<i>Charge to 80%</i>	1.0hr	50min	50min	<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>																		
<i>Charge to 80%</i>	1.0hr	50min	50min																		
<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr																		

See footnotes for more detailed information

New ThinkPad X1 Carbon 20A8 (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN	SIM card	Finger print reader	NFC	mDP-VGA Cable	Power Adapter	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20A8002CUS	i5-4300U	4GBx1	14" HD+		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002FUS	i5-4300U	8GBx1	14" HD+		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002GUS	i5-4300U	8GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002NUS	i7-4600U	8GBx1	14" HD+		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002PUS	i5-4300U	4GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8002RUS	i7-4600U	8GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80031US	i5-4300U	4GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80032US	i5-4300U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80037US	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80041US	i5-4300U	4GBx1	14" HD+		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80045US	i7-4600U	8GBx1	14" HD+		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80047US	i5-4300U	4GBx1	14" WQHD		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80048US	i7-4600U	8GBx1	14" WQHD		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A80049US	i5-4300U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8004AUS	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8004BUS	i5-4300U	8GBx1	14" HD+		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8004EUS	i5-4300U	8GBx1	14" WQHD		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	No	01/14
20A8007XUS	i5-4300U	4GBx1	14" HD+		Intel HD 4400	720p	128G SSD	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	Yes	04/14
20A80085US	i5-4300U	4GBx1	14" WQHD	MT	Intel HD 4400	720p	180G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	Yes	04/14
20A80088US	i5-4300U	4GBx1	14" WQHD		Intel HD 4400	720p	180G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	Yes	04/14
20A80083US	i7-4600U	8GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	Yes	04/14
20A80086US	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	Yes	04/14
20A80089US	i7-4600U	8GBx1	14" HD+		Intel HD 4400	720p	256G SSD eDrive	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Depot	Yes	04/14

• For detailed platform specifications, please see [New ThinkPad X1 Carbon Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, voice input support, combo audio/microphone jack														
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)														
Optical Storage	None M.2 Solid State Drive (SSD)				Smart Card Read	None														
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio				Multicard Reader	None														
MultiTouch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS				Ports	Two USB 3.0 (one Always On), Mini DP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)														
Camera	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture, 270 nits				Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable														
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input				WLAN ⁴	<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card														
Graphics	Intel HD Graphics 4400 or 5000				WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS														
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit				SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider														
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter														
ThinkLight™	None				Ethernet	Ethernet Extension cable														
Dimensions ³	<i>WQHD (WxDxH):</i> 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm <i>HD+ (WxDxH):</i> 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm <i>WQHD Touch (WxDxH):</i> 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm				NFC	<i>Optional:</i> Near Field Communication														
Weight ²	<table><tr><td><i>Models</i></td><td><i>WQHD</i></td><td><i>HD+</i></td><td><i>WQHD Touch</i></td></tr><tr><td><i>Weight</i></td><td>2.82 lb / 1.28kg</td><td>2.96 lb / 1.34kg</td><td>3.15 lb / 1.43kg</td></tr></table>				<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>	<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg	Security	Power-on / hard disk / supervisor password, security keyhole, reset switch						
<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>																	
<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg																	
Case material	Display cover: Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum				Security chip	Trusted Platform Module, TCG 1.2-compliant														
Battery - type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models														
Battery - life ¹⁰	Integrated battery: up to 9 hr				Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor														
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter				Preload	<i>Win7 P64 DG Win8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit														
RapidCharge	<table><tr><td><i>AC Adapter</i></td><td><i>45W</i></td><td><i>65W Slim</i></td><td><i>65W</i></td></tr><tr><td><i>Charge to 80%</i></td><td>1.0hr</td><td>50min</td><td>50min</td></tr><tr><td><i>Charge to 100%</i></td><td>2.3hr</td><td>2.1hr</td><td>2.1hr</td></tr></table>				<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>	<i>Charge to 80%</i>	1.0hr	50min	50min	<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite		
<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>																	
<i>Charge to 80%</i>	1.0hr	50min	50min																	
<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr																	

See footnotes for more detailed information

New ThinkPad X1 Carbon 20A8 (Windows 8) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen Multi-touch display	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN	SIM card	Finger print reader	NFC	mDP-VGA Cable	Power Adapter	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20A8001DUS	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001EUS	i5-4300U	4GBx1	14" HD+	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001JUS	i7-4600U	8GBx1	14" HD+	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001KUS	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001MUS	i7-4600U	8GBx1	14" WQHD MT	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001VUS	i5-4300U	4GBx1	14" WQHD MT	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001WUS	i5-4300U	4GBx1	14" HD+	Intel HD 4400	720p	128G SSD	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001XUS	i5-4300U	4GBx1	14" WQHD MT	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001YUS	i7-4600U	8GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001HUS	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	128G SSD	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001LUS	i7-4600U	8GBx1	14" WQHD MT	Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8001UUS	i7-4600U	8GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A80020US	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 64	3-Onsite	No	01/14
20A8002DUS	i5-4300U	4GBx1	14" HD+	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002EUS	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002YUS	i5-4300U	8GBx1	14" WQHD	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A80030US	i5-4300U	8GBx1	14" WQHD MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A80034US	i7-4600U	8GBx1	14" WQHD MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	EM7355	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8007YUS	i5-4300U	4GBx1	14" WQHD MT	Intel HD 4400	720p	180G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	Yes	04/14
20A80082US	i5-4300U	4GBx1	14" WQHD	Intel HD 4400	720p	180G SSD OPAL	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	Yes	04/14
20A80084US	i5-4300U	4GBx1	14" HD+	Intel HD 4400	720p	128G SSD	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	Yes	04/14
20A80080US	i7-4600U	8GBx1	14" HD+	Intel HD 4400	720p	256G SSD eDrive	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	Yes	04/14
20A80081US	i7-4600U	8GBx1	14" WQHD MT	Intel HD 4400	720p	256G SSD eDrive	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	Yes	04/14
20A80087US	i7-4600U	8GBx1	14" WQHD	Intel HD 4400	720p	256G SSD eDrive	7260 a/b/g/n	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	Yes	04/14

• For detailed platform specifications, please see [New ThinkPad X1 Carbon Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, voice input support, combo audio/microphone jack													
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)													
Optical Storage	None M.2 Solid State Drive (SSD)				Smart Card Read	None													
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio				Multicard Reader	None													
MultiTouch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS				Ports	Two USB 3.0 (one Always On), Mini DP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)													
Camera	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture, 270 nits				Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable													
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input				WLAN ⁴	<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card													
Graphics	Intel HD Graphics 4400 or 5000				WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS													
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit				SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider													
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
ThinkLight™	None				Ethernet	Ethernet Extension cable <i>Optional:</i> Near Field Communication													
Dimensions ³	<i>WQHD (WxDxH):</i> 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm <i>HD+ (WxDxH):</i> 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm <i>WQHD Touch (WxDxH):</i> 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm				NFC	<i>Optional:</i> Near Field Communication													
Weight ²	<table><tr><td><i>Models</i></td><td><i>WQHD</i></td><td><i>HD+</i></td><td><i>WQHD Touch</i></td></tr><tr><td><i>Weight</i></td><td>2.82 lb / 1.28kg</td><td>2.96 lb / 1.34kg</td><td>3.15 lb / 1.43kg</td></tr></table>				<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>	<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg	Security	Power-on / hard disk / supervisor password, security keyhole, reset switch					
<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>																
<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg																
Case material	<i>Display cover:</i> Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum				Security chip	Trusted Platform Module, TCG 1.2-compliant													
Battery - type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models													
Battery - life ¹⁰	<i>Integrated battery:</i> up to 9 hr				Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor													
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter				Preload	<i>Win7 P64 DG Win8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit													
RapidCharge	<table><tr><td><i>AC Adapter</i></td><td><i>45W</i></td><td><i>65W Slim</i></td><td><i>65W</i></td></tr><tr><td><i>Charge to 80%</i></td><td>1.0hr</td><td>50min</td><td>50min</td></tr><tr><td><i>Charge to 100%</i></td><td>2.3hr</td><td>2.1hr</td><td>2.1hr</td></tr></table>				<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>	<i>Charge to 80%</i>	1.0hr	50min	50min	<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite	
<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>																
<i>Charge to 80%</i>	1.0hr	50min	50min																
<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr																

See footnotes for more detailed information

New ThinkPad X1 Carbon 20A8 (Windows 8) - Onsite - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Multi-touch	Graphics	Camera	Storage	M.2 Card WLAN	M.2 Card WWAN	SIM card	Finger print reader	NFC	MDP-VGA Cable	Power Adapter	Preload	Base Warranty (year)	Global	Ann Date (m/y)
20A8002HUS	i5-4300U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002JUS	i7-4600U	8GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002LUS	i5-4300U	8GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002MUS	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002QUS	i5-4300U	4GBx1	14" WQHD		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002SUS	i5-4300U	4GBx1	14" HD+		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002VUS	i7-4600U	8GBx1	14" HD+		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8002XUS	i5-4300U	4GBx1	14" WQHD	MT	Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A80035US	i5-4300U	8GBx1	14" HD+		Intel HD 4400	720p	256G SSD eDrive	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A80042US	i7-4600U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A80043US	i5-4300U	8GBx1	14" WQHD	MT	Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A80044US	i5-4300U	8GBx1	14" WQHD		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A80046US	i7-4600U	8GBx1	14" HD+		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8004CUS	i5-4300U	4GBx1	14" HD+		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8004DUS	i5-4300U	4GBx1	14" WQHD		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8004FUS	i5-4300U	8GBx1	14" HD+		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14
20A8004GUS	i7-4600U	8GBx1	14" WQHD		Intel HD 4400	720p	240G SSD OPAL	7260 ac	upg	None	Finger	None	None	65W	Win8.1 P64	3-Onsite	No	01/14

• For detailed platform specifications, please see [New ThinkPad X1 Carbon Platform Specifications](#) sheet

Processor	4th Generation Intel® Core™ i5 / i7 Processor				Audio support	HD Audio, Realtek® ALC3232 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array microphone, voice input support, combo audio/microphone jack															
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L / soldered to systemboard, no sockets				Chipset	Intel 4th Generation core 1 chip (integrated chipset with processor)															
Optical Storage	None M.2 Solid State Drive (SSD)				Smart Card Read	None															
Widescreen display	<i>Some:</i> 14.0" (355mm) HD+ (1600x900) , 250 nits, 400:1 contrast ratio				Multicard Reader	None															
MultiTouch	<i>Some:</i> 14.0" (355mm) WQHD (2560x1440) , 300 nits, 700:1 contrast ratio, IPS				Ports	Two USB 3.0 (one Always On), Mini DP, HDMI, Ethernet extension connector, Lenovo OneLink connector, Micro-SIM card tray (WWAN upg / WWAN model only)															
Camera	<i>Some:</i> Capacitive-type MultiTouch, supports ten-finger gesture, 270 nits				Monitor Cable	<i>Some:</i> Mini DisplayPort to VGA Monitor Cable															
Light sensor	HD720p resolution, low light sensitive, face tracking, fixed focus, gesture input				WLAN ⁴	<i>7260 b/g/n:</i> Intel Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 a/b/g/n:</i> Intel Dual Band Wireless-N 7260, 2x2, Wi-Fi + BT, M.2 Card <i>7260 ac:</i> Intel Dual Band Wireless-AC 7260, 2x2, Wi-Fi + BT, M.2 Card															
Graphics	Intel HD Graphics 4400 or 5000				WWAN (optional)	<i>upg:</i> Wireless WAN upgradable <i>EM7355:</i> Sierra Wireless EM7355, Qualcomm® Gobi™ 4G LTE/ HSPA+/EVDO/GSM/GPRS/EDGE, GPS															
Keyboard	Adaptive Keyboard with a dynamically changing row providing additional functionality based on the type of the application active / 5-row, spill-resistant (except Adaptive Keys), LED backlit				SIM card (optional)	<i>AT&T / Verizon:</i> AT&T® / Verizon® LTE (4G), contract required with service provider <i>select:</i> User selectable, contract required with service provider															
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch				Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter															
ThinkLight™	None				Ethernet	Ethernet Extension cable															
Dimensions ³	<i>WQHD (WxDxH):</i> 13.03" x 8.92" x 0.70"; 331.0mm x 226.5mm x 17.72mm <i>HD+ (WxDxH):</i> 13.03" x 8.93" x 0.71"; 331.0mm x 226.8mm x 18.16mm <i>WQHD Touch (WxDxH):</i> 13.03" x 8.94" x 0.73"; 331.0mm x 227.1mm x 18.46mm				NFC	<i>Optional:</i> Near Field Communication															
Weight ²	<table><tr><td><i>Models</i></td><td><i>WQHD</i></td><td><i>HD+</i></td><td><i>WQHD Touch</i></td></tr><tr><td><i>Weight</i></td><td>2.82 lb / 1.28kg</td><td>2.96 lb / 1.34kg</td><td>3.15 lb / 1.43kg</td></tr></table>				<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>	<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg	Security	Power-on / hard disk / supervisor password, security keyhole, reset switch							
<i>Models</i>	<i>WQHD</i>	<i>HD+</i>	<i>WQHD Touch</i>																		
<i>Weight</i>	2.82 lb / 1.28kg	2.96 lb / 1.34kg	3.15 lb / 1.43kg																		
Case material	<i>Display cover:</i> Carbon-Fiber Reinforced Plastic + Glass-Fiber Reinforced Plastic; <i>Bottom:</i> Magnesium/Aluminum				Security chip	Trusted Platform Module, TCG 1.2-compliant															
Battery - type	Integrated Lithium Polymer 8-cell (45Wh) RapidCharge battery				vPro & iAMT	vPro and Intel Active Management Technology (iAMT) support on selected models															
Battery - life ¹⁰	<i>Integrated battery:</i> up to 9 hr				Fingerprint reader	Fingerprint reader on the keyboard bezel, swipe sensor															
AC Adapter	45W AC Adapter, 65W Slim AC Adapter, or 65W AC Adapter				Preload	<i>Win7 P64 DG Win8.1:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit <i>Win8.1 64:</i> Windows 8 / 8.1 64-bit <i>Win8.1 P64:</i> Windows 8 / 8.1 Pro 64-bit															
RapidCharge	<table><tr><td><i>AC Adapter</i></td><td><i>45W</i></td><td><i>65W Slim</i></td><td><i>65W</i></td></tr><tr><td><i>Charge to 80%</i></td><td>1.0hr</td><td>50min</td><td>50min</td></tr><tr><td><i>Charge to 100%</i></td><td>2.3hr</td><td>2.1hr</td><td>2.1hr</td></tr></table>				<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>	<i>Charge to 80%</i>	1.0hr	50min	50min	<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr	Limited warranty ¹²	1-year - depot / 3-years (1-yr battery) - depot / 3-years (1-year battery) onsite			
<i>AC Adapter</i>	<i>45W</i>	<i>65W Slim</i>	<i>65W</i>																		
<i>Charge to 80%</i>	1.0hr	50min	50min																		
<i>Charge to 100%</i>	2.3hr	2.1hr	2.1hr																		

See footnotes for more detailed information



Lenovo® ThinkPad Edge E431



Lenovo ThinkPad Edge E431



Lenovo ThinkPad Edge E431



Lenovo ThinkPad Edge E531



Lenovo ThinkPad Edge E531



Lenovo ThinkPad Edge E531
with Numeric Keypad

ThinkPad Edge E431 6277 (Intel) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6277-DGU	i5-3320M	4GBx1	14.0" HD	720p	320G 5400	Intel 2230 + BT	None	Black	None	6	48	Prem 64	01/14
6277-DFU	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	None	6	48	Prem 64	01/14

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications (only some listed) • Adobe® Reader® • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm	
Weight ²	6-cell: from 4.70 lb (2.13kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell	
Battery - life ¹⁰	6-cell (48Whr): up to 6.3 hr 6-cell (62Whr): up to 8.2 hr	
Chipset	Mobile Intel HM77 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	Supports ThinkVantage® technologies
M.2 Card	One M.2 Card slot for support of SSD	
M.2 WWAN	None	65-watt AC adapter
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	EPEAT™ Gold rating
Ethernet	Realtek® RTL8111F Gigabit Network Connection	ENERGY STAR® 5.2-compliant
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	RoHS-compliant
Security	Power-on password, hard disk password, supervisor password, security keyhole	International Warranty Service ¹⁷
Security chip	None	24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor	For Lenovo ²² service upgrade options, please go to S-EDGE sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information
US model(s) announced January 7, 2014

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ThinkPad Edge E431 6277 (Intel) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6277-58U	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	04/13
6277-59U	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	Intel 2230 + BT	None	Black	None	6	48	Win8 Pro64	04/13
6277-5AU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-5BU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5CU	i7-3632QM	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-5DU	i7-3632QM	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5EU	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5FU	i3-2348M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	04/13
6277-5GU	i3-2348M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	04/13
6277-5HU	i5-3230M	4GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-5JU	i5-3230M	4GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-5KU	i5-3230M	4+2GB	14.0" HD	720p	1TB 5400	Intel 2230 + BT	None	Black	Finger	6	48	Win8 64	04/13
6277-74U	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-75U	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	24GB	Black	Finger	6	48	Win7 Pro64	04/13
6277-76U	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	24GB	Black	Finger	6	48	Win8 Pro64	04/13
6277-77U	i5-3230M	4+2GB	14.0" HD	720p	1TB 5400	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	04/13
6277-78U	i5-3230M	4+2GB	14.0" HD	720p	1TB 5400	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	04/13
6277-CBU	i3-3130M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	08/13

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3130M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology</p>								<p>Preloaded operating system²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit</p> <p>Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo SimpleTap • Adobe® Reader®</p> <p>- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage</p> <p>- All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate</p>				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets												
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™												
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot												
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio												
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator												
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>												
Keyboard	6-row, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³												
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch												
ThinkLight™	None												
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm												
Weight ²	6-cell: from 4.70 lb (2.13kg)												
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom												
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic												
Battery - type ³⁷	Lithium Ion 6-cell												
Battery - life ¹⁰	6-cell (48Whr): up to 6.3 hr 6-cell (62Whr): up to 8.2 hr												
Chipset	Mobile Intel HM77 Express Chipset												
ExpressCard	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)												
PCIe Mini Card	One PCI Express Half Mini Card slot												
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter												
M.2 Card	One M.2 Card slot for support of SSD												
M.2 WWAN	None												
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card												
Ethernet	Realtek® RTL8111F Gigabit Network Connection												
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole												
Security	None												
Security chip	None												
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor												
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												

See footnotes for more detailed information
 US model(s) announced April 30, or August 20, 2013

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 (LIN1-1) August 2013

ThinkPad Edge E431 6277 (Intel) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCle Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6277-9QU	i7-3632QM	8GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	06/13
6277-9RU	i7-3632QM	8GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	06/13
6277-AUU	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win8 64	06/13
6277-AVU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	Finger	6	48	Win8 64	06/13
6277-AWU	i3-2348M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win8 Pro64	06/13
6277-AXU	i3-2348M	2GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win8 Pro64	06/13
6277-AYU	i7-3632QM	8GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win8 Pro64	06/13
6277-AZU	i7-3632QM	8GBx1	14.0" HD	720p	128G SSD	Intel 2230 + BT	None	Black	Finger	6	48	Win7 Pro64	06/13
6277-B2U	i3-3110M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	06/13
6277-B3U	i3-3110M	4GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n + BT	None	Black	None	6	48	Win8 Pro64	06/13
6277-BTU	i3-3110M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BUW	i3-3110M	2GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BVU	i3-3110M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BWU	i7-3632QM	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BXU	i3-3120M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-BYU	i5-3230M	4GBx1	14.0" HD	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	07/13
6277-DEU	i3-3120M	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	None	6	48	Win8 64	01/14
Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000 , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology								Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo SimpleTap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets												
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™												
M.2 SSD	None												
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio												
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator												
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz												
Keyboard	6-row, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³												
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch												
ThinkLight™	None												
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm												
Weight ²	6-cell: from 4.70 lb (2.13kg)												
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom												
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic												
Battery - type ³⁷	Lithium Ion 6-cell												
Battery - life ¹⁰	6-cell (48Whr): up to 6.3 hr 6-cell (62Whr): up to 8.2 hr												
Chipset	Mobile Intel HM77 Express Chipset												
ExpressCard	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)												
PCle Mini Card	One PCI Express Half Mini Card slot												
PCle WLAN ⁴	Some: 11b/g/n, PCle Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter Some: 11a/b/g/n, PCle Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter Some: 11b/g/n, PCle Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter								Supports ThinkVantage® technologies				
M.2 Card	One M.2 Card slot for support of SSD												
M.2 WWAN	None								65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.2-compliant RoHS-compliant				
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCle Half Mini Card								International Warranty Service ¹⁷				
Ethernet	Realtek® RTL8111F Gigabit Network Connection								24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	None												
Fingerprint reader	Some: UPEK Fingerprint reader on palm rest, swipe sensor								For Lenovo ²² service upgrade options, please go to S-EDGE sheet				
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												

See footnotes for more detailed information

US model(s) announced June 11, June 25, or July 16, 2013 or January 7, 2014

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ThinkPad Edge E431 6277 (Intel) - Optimus (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6277-CCU	i5-3230M	4GBx1	14.0" HD	710M	720p	500G 7200	Intel 2230 + BT	None	Black	None	6	48	Win7 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models <ul style="list-style-type: none">• Access Connections™• ThinkVantage Power Manager• ThinkVantage Tools• Lenovo SimpleTap• Adobe® Reader® - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage - All models <ul style="list-style-type: none">• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™			
M.2 SSD	None			
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA GeForce® 710M , PCI Express® x 8, 1GB memory, DirectX® 11.1, NVIDIA PureVideo® HD technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector <i>Max external resolution: 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI) @60Hz</i>			
Keyboard	6-row, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³			
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch			
ThinkLight™	None			
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344mm x 239mm x 26.3-29.3mm			
Weight ²	6-cell: from 4.70 lb (2.13kg)			
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type ³⁷	Lithium Ion 6-cell			
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr 6-cell (62Whr): up to 8.0 hr			
Chipset	Mobile Intel HM77 Express Chipset			
ExpressCard	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
PCIe Mini Card	One PCI Express Half Mini Card slot			
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter			
M.2 Card	One M.2 Card slot for support of SSD			
M.2 WWAN	None			
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card			
Ethernet	Realtek® RTL8111F Gigabit Network Connection			
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	None			
Fingerprint reader	None			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			
Supports ThinkVantage® technologies				
90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.2-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
For Lenovo ²² service upgrade options, please go to S-EDGE sheet				

See footnotes for more detailed information
US model(s) announced August 20, 2013

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ThinkPad Edge E431 6886 (Intel) - TopSeller (Win 8) - MultiTouch

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Battery cells	Battery /Wh	Preload	Ann date (mm/yy)
6886-2WU	i3-3120M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	04/13
6886-2XU	i5-3230M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	04/13
6886-2YU	i7-3632QM	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	04/13
6886-3XU	i3-3120M	4GBx1	14.0" HD Touch	720p	320G 7200	Intel 2230 + BT	None	black	None	6	48	Win8 Pro64	04/13
6886-44U	i3-2348M	4GBx1	14.0" HD Touch	720p	320G 5400	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-45U	i3-2348M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-46U	i5-3230M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-47U	i7-3632QM	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-48U	i7-3632QM	8GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	06/13
6886-4HU	i3-3110M	4GBx1	14.0" HD Touch	720p	320G 5400	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	08/13
6886-4JU	i3-3110M	4GBx1	14.0" HD Touch	720p	320G 5400	Intel 2230 + BT	None	black	None	6	48	Win8 Pro64	08/13
6886-4KU	i3-3110M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 Pro64	08/13
6886-4LU	i3-3110M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	None	6	48	Win8 Pro64	08/13
6886-4MU	i3-3120M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 2230 + BT	None	black	Finger	6	48	Win8 64	10/13
6886-4NU	i5-3230M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 64	10/13
6886-4PU	i7-3632QM	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 2230 + BT	None	black	Finger	6	48	Win8 64	10/13

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology</p>								<p>Preloaded operating system²⁰ - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit</p> <p>Preloaded applications¹⁴ (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate • Skype™</p>				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets												
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™												
M.2 SSD	None												
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, 10-point touch screen												
Camera	LED backlight, 180 nits, 16:9 aspect ratio, 500:1 contrast ratio HD720p resolution, face track, low light sensitive, fixed focus, LED indicator												
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>												
Keyboard	6-row, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³												
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch												
ThinkLight™	None												
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.17-1.29"; 344mm x 239mm x 29.7-32.7mm												
Weight ²	6-cell: from 5.36 lb (2.43kg)												
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom												
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic												
Battery - type ³⁷	Lithium Ion 6-cell												
Battery - life ¹⁰	6-cell (48Whr): up to 6.0 hr 6-cell (62Whr): up to 7.6 hr												
Chipset	Mobile Intel HM77 Express Chipset												
ExpressCard	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)												
PCIe Mini Card	One PCI Express Half Mini Card slot												
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter												
M.2 Card	One M.2 Card slot for support of SSD												
M.2 WWAN	None												
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card												
Ethernet	Realtek® RTL8111F Gigabit Network Connection												
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	None												
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor												
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												

See footnotes for more detailed information

US model(s) announced April 30, June 11, August 20, or October 15, 2013

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ThinkPad E440

ThinkPad®



Lenovo® ThinkPad E440
with MultiTouch Screen



Lenovo ThinkPad E440
with MultiTouch Screen



Lenovo ThinkPad E440



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Lenovo ThinkPad E440



Lenovo ThinkPad E440

ThinkPad E440 20C5 (Intel) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN / SSD	SIM card	Top color	Finger print reader	Battery cells	Battery /Wh	Preload	Ann date (mm/yy)
20C5005KUS	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 64	01/14
20C5005AUS	i5-4200M	4GBx1	14.0" HD	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5004XUS	i3-4000M	4GBx1	14.0" HD	720p	320G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win7 Pro64	01/14
20C50059US	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C50051US	i5-4200M	4GBx1	14.0" HD	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C50058US	i3-4000M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005BUS	i7-4702MQ	8GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005JUS	i3-4000M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win8 64	01/14
20C50056US	i3-4000M	4GBx1	14.0" HD	720p	320G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win8 Pro64	01/14
20C50050US	i7-4702MQ	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C50055US	i7-4702MQ	8GBx1	14.0" HD	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C50057US	i7-4702MQ	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C50052US	i3-4000M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C50058US	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005HUS	i5-4200M	4+2GB	14.0" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 64	01/14
20C50054US	i5-4200M	4+2GB	14.0" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C5004YUS	i5-4200M	4GBx1	14.0" HD	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win7 Pro64	01/14
20C5008CUS	i3-4000M	2GBx1	14.0" HD	720p	320G 7200	Intel 7260 + BT	None	None	Black	None	6	48	Win7 Pro64	01/14

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600 , DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications (only some listed, exclude No OS models) - Windows 7 models • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate			
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot													
Widescreen display	14.0" (355mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio													
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator													
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display													
Keyboard	6-row, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³													
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch													
ThinkLight™	None													
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.04-1.15"; 344 x 239mm x 26.3-29.3mm 6-cell: from 4.69 lb (2.13kg)													
Weight ²														
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type ³⁷	Lithium Ion 6-cell													
Battery - life ¹⁰	6-cell (48Whr): up to 6.3 hr 6-cell (62Whr): up to 8.2 hr													
Chipset	Mobile Intel HM87 Express Chipset													
ExpressCard	None													
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCIe Mini Card	One PCI Express Half Mini Card slot													
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2													
M.2 Card	One M.2 Card slot for support of SSD													
M.2 WWAN	None													
SIM card	None													
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card													
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection													
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Fingerprint reader	Some: Fingerprint reader on palm rest, swipe sensor													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
US model(s) announced January 21, 2014

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Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.2-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹²

ThinkPad E440 20C5 (Intel) - TopSeller (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20C5005GUS	i7-4702MQ	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005CUS	i3-4000M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005DUS	i5-4200M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005FUS	i5-4200M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5005EUS	i7-4702MQ	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8 Pro64	01/14
20C5008AUS	i5-4200M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C50088US	i7-4702MQ	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C50089US	i7-4702MQ	8GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C5008BUS	i5-4200M	4GBx1	14.0" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C50087US	i3-4000M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 Pro64	01/14
20C5008UUS	i3-4000M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 64	03/14
20C5008VUS	i5-4200M	4GBx1	14.0" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Black	Finger	6	48	Win8.1 64	03/14

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600 , DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows 8 Pro 64-bit - Some: Windows 8.1 64-bit - Some: Windows 8.1 Pro 64-bit Preloaded applications (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™		
M.2 SSD	None		
Widescreen display	14.0" (355mm) HD (1366x768) , anti-glare, 10-point touch screen LED backlight, 180 nits, 16:9 aspect ratio		
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator		
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.54" x 9.41" x 1.17-1.27"; 344 x 239mm x 29.7-32.3mm <i>6-cell:</i> from 5.36 lb (2.43kg)		
Weight ²	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom		
Case color	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Case material	Lithium Ion 6-cell		
Battery - type ³⁷	<i>6-cell (48Whr):</i> up to 6.3 hr		
Battery - life ¹⁰	<i>6-cell (62Whr):</i> up to 8.2 hr		
Chipset	Mobile Intel HM87 Express Chipset		
ExpressCard	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	One PCI Express Half Mini Card slot		
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2		
M.2 Card	One M.2 Card slot for support of SSD		
M.2 WWAN	None		
SIM card	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card		
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection		
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.2-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²

See footnotes for more detailed information
US model(s) announced January 21, or March 11, 2014

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ThinkPad Edge E531 6885 (Intel) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6885-28U	i7-3632QM	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-2BU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-5DU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-5TU	i3-3120M	4GBx1	15.6" HD	720p	320G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	04/13
6885-5UU	i3-3120M	4GBx1	15.6" HD	720p	320G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win8 Pro64	04/13
6885-5VU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-5WU	i7-3632QM	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-5ZU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-62U	i5-3230M	4GBx1	15.6" HD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-63U	i5-3230M	4GBx1	15.6" HD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-64U	i5-3230M	4+2GB	15.6" HD	720p	1TB 5400	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 64	04/13
6885-65U	i5-3230M	4+2GB	15.6" HD	720p	1TB 5400	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-66U	i5-3230M	4+2GB	15.6" HD	720p	1TB 5400	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-84U	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	24GB	Numpad	Black	Finger	6	48	Win8 Pro64	04/13
6885-88U	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	24GB	Numpad	Black	Finger	6	48	Win7 Pro64	04/13
6885-9ZU	i7-3632QM	8GBx1	15.6" FHD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	06/13
6885-A2U	i7-3632QM	8GBx1	15.6" FHD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	06/13
6885-A3U	i7-3632QM	8GBx1	15.6" FHD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win7 Pro64	06/13
6885-A4U	i7-3632QM	8GBx1	15.6" FHD	720p	128G SSD	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 Pro64	06/13
6885-BGU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win8 64	06/13
6885-BHU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	Finger	6	48	Win8 64	06/13

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit			
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Lenovo Simple Tap • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate			
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™													
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot													
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator													
Graphics	Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz													
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys, numeric keypad													
Touchpad	TrackPoint pointing device, Internet Scroll Bar ¹³													
ThinkLight™	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch													
None	None													
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm													
Weight ²	6-cell: from 5.4 lb (2.46kg)													
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type ³⁷	Lithium Ion 6-cell													
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr 6-cell (62Whr): up to 8.1 hr													
Chipset	Mobile Intel HM77 Express Chipset													
ExpressCard	None													
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCIe Mini Card	One PCI Express Half Mini Card slot													
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2													
M.2 Card	One M.2 Card slot for support of SSD													
M.2 WWAN	None													
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card													
Ethernet	Realtek® RTL8111F Gigabit Network Connection													
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	None													
Fingerprint reader	Some: UPEK Fingerprint reader on palm rest, swipe sensor													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
US model(s) announced April 30 or June 11, 2013

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Supports ThinkVantage® technologies

65-watt AC adapter
EPEAT™ Gold rating
ENERGY STAR® 5.2-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support
during the warranty period¹²

For Lenovo²² service upgrade
options, please go to S-EDGE sheet

ThinkPad Edge E531 6885 (Intel) - TopSeller (Windows 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
6885-5XU	i3-2348M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	04/13
6885-5YU	i3-2348M	2GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	04/13
6885-BJU	i3-2348M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	06/13
6885-BKU	i3-2348M	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	06/13
6885-BMU	i3-3110M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	06/13
6885-BNU	i3-3110M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	06/13
6885-CCU	i3-3110M	2GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CDU	i3-3110M	2GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CEU	i3-3110M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CFU	i7-3632QM	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CGU	i3-3120M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-CHU	i5-3230M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	07/13
6885-D8U	i3-3110M	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n + BT	None	Numpad	Black	None	6	48	Win8 Pro64	08/13
6885-DAU	i3-3130M	4GBx1	15.6" HD	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6	48	Win7 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3120M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i3-3130M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-3632QM processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ <ul style="list-style-type: none">- <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit- <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) <ul style="list-style-type: none">- Windows 7 models<ul style="list-style-type: none">• Access Connections™• ThinkVantage Power Manager• ThinkVantage Tools• Lenovo SimpleTap• Adobe® Reader®- Windows 8 models<ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage- All models<ul style="list-style-type: none">• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
M.2 SSD	None	
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 or Intel HD Graphics 4000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz	
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
ThinkLight™	None	
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm <i>6-cell:</i> from 5.4 lb (2.46kg)	
Weight ²	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case color	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Case material	Lithium Ion 6-cell	
Battery - type ³⁷	<i>6-cell (48Whr):</i> up to 6.2 hr	
Battery - life ¹⁰	<i>6-cell (62Whr):</i> up to 8.1 hr	
Chipset	Mobile Intel HM77 Express Chipset	
ExpressCard	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + BT combo adapter <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 2x2, Wi-Fi + BT combo adapter	
M.2 Card	One M.2 Card slot for support of SSD	Supports ThinkVantage® technologies
M.2 WWAN	None	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.2-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card	
Ethernet	Realtek® RTL8111F Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	None	For Lenovo ²² service upgrade options, please go to S-EDGE sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

US model(s) announced April 30, June 11, June 25, July 16, or August 20, 2013

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(GAT1-2) August 2013

ThinkPad Edge E531 6885 (Intel) - Optimus (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Numeric Keypad	Top color	Finger print reader	Bat- tery cells /Wh	Bat- tery Preload	Ann date (mm/yy)
6885-D9U	i5-3230M	4GBx1	15.6" HD	710M	720p	500G 7200	Intel 2230 + BT	None	Numpad	Black	None	6 48	Win7 Pro64	08/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit Preloaded applications (only some listed) - Windows 7 models <ul style="list-style-type: none">• Access Connections™• ThinkVantage Power Manager• ThinkVantage Tools• Lenovo SimpleTap• Adobe® Reader® - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage - All models <ul style="list-style-type: none">• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
M.2 SSD	None		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4000 in processor, and NVIDIA GeForce® 710M , PCI Express® x 8, 1GB memory, DirectX® 11.1, or NVIDIA GeForce® GT740M , PCI Express® x 8, 2GB memory, DirectX® 11.1, NVIDIA PureVideo® HD technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector <i>Max external resolution:</i> 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz		
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch		
ThinkLight™	None		
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm <i>6-cell:</i> from 5.5 lb (2.49kg)		
Weight ²	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom		
Case color	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Case material	Lithium Ion 6-cell		
Battery - type ³⁷	<i>6-cell (48Whr):</i> up to 6.2 hr		
Battery - life ¹⁰	<i>6-cell (62Whr):</i> up to 8.0 hr		
Chipset	Mobile Intel HM77 Express Chipset		
ExpressCard	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	One PCI Express Mini Card slot		
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
M.2 Card	One M.2 Card slot for support of SSD		
M.2 WWAN	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2 / Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	None		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.2-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For Lenovo ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
US model(s) announced August 20, 2013

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Lenovo® ThinkPad E540



Lenovo ThinkPad E540



Lenovo ThinkPad E540
with Numeric Keypad



Lenovo ThinkPad E540
with Touch Screen



Lenovo ThinkPad E540
with Touch Screen



Lenovo ThinkPad E540
with Touch Screen

ThinkPad E540 20C6 (Intel) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery Wh	Preload	Ann date (mm/yy)
20C60058US	i7-4702MQ	8GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6005DUS	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60057US	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6005SUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 64	01/14
20C6005GUS	i7-4702MQ	8GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60055US	i5-4200M	4GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6005BUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60053US	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60054US	i3-4000M	4GBx1	15.6" HD	720p	320G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win7 Pro64	01/14
20C6005RUS	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win7 Pro64	01/14
20C6005HUS	i7-4702MQ	8GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005AUS	i3-4000M	4GBx1	15.6" HD	720p	320G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win8 Pro64	01/14
20C6005CUS	i7-4702MQ	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005EUS	i5-4200M	4+2GB	15.6" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6005QUS	i5-4200M	4+2GB	15.6" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 64	01/14
20C60059US	i7-4702MQ	8GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60056US	i5-4200M	4+2GB	15.6" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60052US	i7-4702MQ	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6005FUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600 , DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications (only some listed) - Windows 7 models • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate				
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™														
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot														
Widescreen display	15.6" (396mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio														
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator														
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display														
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad														
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³														
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch														
ThinkLight™	None														
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm 6-cell: from 5.4 lb (2.46kg)														
Weight ²	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom														
Case color	Acrylonitrile-Butadiene-Styrene (ABS) plastic														
Case material	Lithium Ion 6-cell														
Battery - type ³⁷	6-cell (48Whr): up to 6.2 hr														
Battery - life ¹⁰	6-cell (62Whr): up to 7.4 hr														
Chipset	Mobile Intel HM87 Express Chipset														
ExpressCard	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
PCIe Mini Card	One PCI Express Half Mini Card slot														
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2														
M.2 Card	One M.2 Card slot for support of SSD														
M.2 WWAN	None														
SIM card	None														
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card														
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection														
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	Some: Fingerprint reader on palm rest, swipe sensor														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
US model(s) announced January 21, 2014

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ThinkPad E540 20C6 (Intel) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20C6008TUS	i5-4200M	4+2GB	15.6" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60096US	i7-4702MQ	8GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008VUS	i3-4000M	2GBx1	15.6" HD	720p	320G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win7 Pro64	01/14
20C60097US	i5-4200M	4+2GB	15.6" HD	720p	1TB 5400	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008UUS	i5-4200M	4GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008RUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60092US	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	16GB	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008YUS	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win8 Pro64	01/14
20C60093US	i7-4702MQ	8GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60090US	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008QUS	i7-4702MQ	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008XUS	i7-4702MQ	8GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60091US	i5-4200M	4GBx1	15.6" HD	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60090US	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C6008WUS	i3-4000M	4GBx1	15.6" HD	720p	320G 7200	Intel 7260 + BT	None	None	Numpad	Black	None	6	48	Win7 Pro64	01/14
20C6008SUS	i5-4200M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	01/14
20C60095US	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C60094US	i7-4702MQ	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C600AAUS	i3-4000M	4GBx1	15.6" HD	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win7 Pro64	02/14

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600 , DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications (only some listed) - Windows 7 models • Adobe® Reader® - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate				
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™														
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot														
Widescreen display	15.6" (396mm) HD (1366x768) , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio														
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator														
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display														
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad														
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³														
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch														
ThinkLight™	None														
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm 6-cell: from 5.4 lb (2.46kg)														
Weight ²	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom														
Case color	Acrylonitrile-Butadiene-Styrene (ABS) plastic														
Case material	Lithium Ion 6-cell														
Battery - type ³⁷	6-cell (48Whr): up to 6.2 hr														
Battery - life ¹⁰	6-cell (48Whr): up to 6.2 hr														
Chipset	Mobile Intel HM87 Express Chipset														
ExpressCard	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
PCIe Mini Card	One PCI Express Half Mini Card slot														
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2														
M.2 Card	One M.2 Card slot for support of SSD														
M.2 WWAN	None														
SIM card	None														
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card														
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection														
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	Some: Fingerprint reader on palm rest, swipe sensor														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available														

See footnotes for more detailed information

US model(s) announced January 21, or February 18, 2014

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(GAT2-2) February 2014

ThinkPad E540 20C6 (Intel) - TopSeller (MultiTouch)

Product Specifications Reference (PSREF)

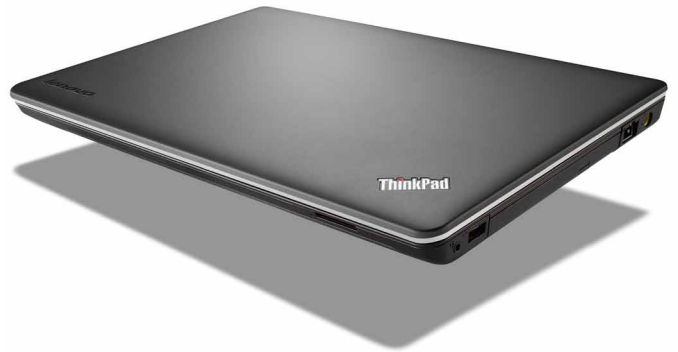
Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	SIM card	Numeric Keypad	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20C6005KUS	i5-4200M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005PUS	i7-4702MQ	8GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005LUS	i7-4702MQ	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005MUS	i5-4200M	4GBx1	15.6" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005NUS	i7-4702MQ	8GBx1	15.6" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6005JUS	i3-4000M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8 Pro64	01/14
20C6008NUS	i5-4200M	4GBx1	15.6" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008MUS	i5-4200M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008LUS	i7-4702MQ	8GBx1	15.6" HD Touch	720p	128G SSD	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008JUS	i3-4000M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C6008KUS	i7-4702MQ	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 Pro64	01/14
20C600BAUS	i5-4200M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 64	03/14
20C600B9US	i3-4000M	4GBx1	15.6" HD Touch	720p	500G 7200	Intel 7260 + BT	None	None	Numpad	Black	Finger	6	48	Win8.1 64	03/14

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-4000M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4600 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology Intel Core i7-4702MQ processor (4 cores, 2.20GHz, 6MB cache), Intel HD Graphics 4600 , DDR3L memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows 8 Pro 64-bit - <i>Some:</i> Windows 8.1 64-bit - <i>Some:</i> Windows 8.1 Pro 64-bit Preloaded applications (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™		
M.2 SSD	None		
Widescreen display	15.6" (396mm) HD (1366x768) , anti-glare, 10-point touch screen LED backlight, 200 nits, 16:9 aspect ratio		
Camera	HD720p resolution, face track, low light sensitive, fixed focus, LED indicator		
Graphics	Intel HD Graphics 4600 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display		
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch		
ThinkLight™	None		
Dimensions ³	15.6W" (WxDxH): 14.84" x 9.84" x 1.05-1.17"; 377 x 250mm x 26.6-29.6mm <i>6-cell:</i> from 5.4 lb (2.46kg)		
Weight ²	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom		
Case color	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Case material	Lithium Ion 6-cell		
Battery - type ³⁷	6-cell (48Whr): up to 6.2 hr		
Battery - life ¹⁰	6-cell (62Whr): up to 7.4 hr		
Chipset	Mobile Intel HM87 Express Chipset		
ExpressCard	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0, one USB 2.0 (powered), OneLink Docking port external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	One PCI Express Half Mini Card slot		
PCIe WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2		
M.2 Card	One M.2 Card slot for support of SSD		
M.2 WWAN	None		
SIM card	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card		
Ethernet	Realtek® RTL8111GUS Gigabit Network Connection		
Audio support	High Definition (HD) Audio, Conexant CX20751-21Z codec / stereo speakers, Dolby Advanced Audio v2 certified / Stereo digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies	
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.2-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	



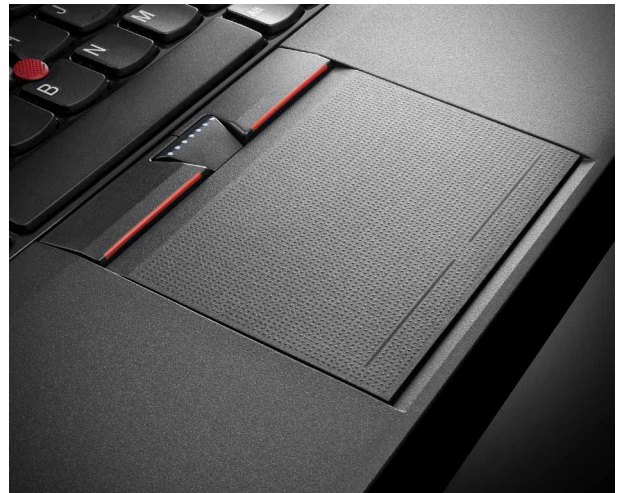
Lenovo® ThinkPad Edge E545



Lenovo ThinkPad Edge E545



Lenovo ThinkPad Edge E545



Lenovo ThinkPad Edge E545



Lenovo ThinkPad Edge E545



Lenovo ThinkPad Edge E545

ThinkPad Edge E545 20B2 (AMD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCle Mini Card WLAN / BT	PCle Mini Card WWAN /mSATA	Card Numeric Keypad	Top color	Micro-phone	Finger-print reader	Bat-tery cells	Preload	Ann date (mm/yy)
20B2001CUS	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Prem 64	01/14
20B2001DUS	A6-5350M	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Prem 64	01/14

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles AMD Accelerated Processor A6-5350M (dual-core, 2.90GHz, 1MB L2 cache), integrated AMD Radeon HD 8450G Graphics, AMD Turbo Core technology (up to 3.50GHz), integrated DDR3 memory controller (up to 1600MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications (only some listed) • Adobe® Reader® • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio		
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator		
Graphics	AMD Radeon HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 1920x1200 (HDMI)@60Hz</i>		
Keyboard	<i>Matte black (top):</i> 6-row, spill-resistant, multimedia Fn keys, numeric keypad		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch		
ThinkLight™	None		
Dimensions ³	<i>Matte black or Matte red (top):</i> 15.6W" (WxDxH): 14.84" x 9.65" x 1.12-1.35"; 377 x 245mm x 28.5-34.3mm		
Weight ²	<i>6-cell:</i> from 5.2 lb (2.37kg)		
Case color	Matte black (top), trimmed with a thin silver band (side); black bottom		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type ³⁷	Lithium Ion 6-cell		
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.2 hr		
Chipset	AMD A76M FCH		
ExpressCard	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Three USB 3.0, one USB 2.0 (powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	One PCI Express Mini Card slot		
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1		
WWAN	None		
Modem	None		
Bluetooth™	None		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2/ Stereo digital microphone or Mono digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	None		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		
			Supports ThinkVantage® technologies
			65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²

See footnotes for more detailed information
US model(s) announced January 7, 2014

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(GLN11-4) January 2014

ThinkPad Edge E545 20B2 (AMD) - TopSeller (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCle Mini Card WLAN / BT	PCle Mini Card WWAN /mSATA	Card Numeric Keypad	Top color	Micro-phone	Finger-print reader	Battery cells	Preload	Ann date (mm/yy)
20B2000SUS	A10-5750M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win8 64	08/13
20B20010US	A8-4500M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	08/13
20B2000VUS	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win8 64	08/13
20B20011US	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	08/13
20B2000KUS	A8-5550M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	08/13
20B2000XUS	A10-5750M	8GBx1	15.6" HD	720p	1TB 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	08/13
20B20012US	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win8 64	08/13
20B2000WUS	A8-5550M	8GBx1	15.6" HD	720p	1TB 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	08/13
20B2000YUS	A10-5750M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	08/13
20B2000RUS	A10-5750M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	08/13
20B2000UUS	A6-5350M	4GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win8 64	08/13
20B2000TUS	A8-4500M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win8 64	08/13
20B2000QUS	A8-5550M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n + BT	None	Numpad	Matte black	Stereo	None	6	Win8 Pro64	08/13
20B2001BUS	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win8 64	10/13
20B2001AUS	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win8 Pro64	10/13
20B20019US	A6-5350M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	10/13
20B2001FUS	A8-5550M	4GBx1	15.6" HD	720p	1TB 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	03/14
20B2001EUS	A8-5550M	8GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	Numpad	Matte black	Stereo	None	6	Win7 Pro64	03/14

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i></p> <p>AMD Accelerated Processor A6-5350M (dual-core, 2.90GHz, 1MB L2 cache), integrated AMD Radeon HD 8450G Graphics, AMD Turbo Core technology (up to 3.50GHz), integrated DDR3 memory controller (up to 1600MHz)</p> <p>AMD Accelerated Processor A8-4500M (quad-core, 1.90GHz, 4MB L2 cache), integrated AMD Radeon HD 7640G Graphics, AMD Turbo Core technology (up to 2.80GHz), integrated DDR3 memory controller (up to 1600MHz)</p> <p>AMD Accelerated Processor A8-5550M (quad-core, 2.10GHz, 4MB L2 cache), integrated AMD Radeon HD 8550G Graphics, AMD Turbo Core technology (up to 3.10GHz), integrated DDR3 memory controller (up to 1600MHz)</p> <p>AMD Accelerated Processor A10-5750M (quad-core, 2.50GHz, 4MB L2 cache), integrated AMD Radeon HD 8650G Graphics, AMD Turbo Core technology (up to 3.50GHz), integrated DDR3 memory controller (up to 1600MHz)</p>									<p>Preloaded operating system²⁰</p> <ul style="list-style-type: none"> - <i>Some:</i> Windows[®] 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - <i>Some:</i> Windows 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit <p>Preloaded applications (only some listed)</p> <ul style="list-style-type: none"> - Windows 7 models • Adobe[®] Reader[®] - Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage - All models (exclude DOS and No OS models) • ThinkVantage System Update • Norton[™] Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate 				
Memory	16GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System [™]													
mSATA [™] SSD	None													
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio													
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator													
Graphics	<p>AMD Radeon HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI[™] (supporting HDCP to output protected content); supports dual independent display;</p> <p><i>Max external resolution: 1920x1200 (HDMI) @60Hz</i></p>													
Keyboard	<i>Matte black (top):</i> 6-row, spill-resistant, multimedia Fn keys, numeric keypad													
TrackPoint [®]	TrackPoint pointing device, Internet Scroll Bar ¹³													
Touchpad	UltraNav [™] , wide touchpad below keyboard, Tap Zones, multi-touch													
ThinkLight [™]	None													
Dimensions ³	<p><i>Matte black or Matte red (top):</i> 15.6W" (WxDxH): 14.84" x 9.65" x 1.12-1.35"; 377 x 245mm x 28.5-34.3mm</p>													
Weight ²	<i>6-cell:</i> from 5.2 lb (2.37kg)													
Case color	Matte black (top), trimmed with a thin silver band (side); black bottom													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type ³⁷	Lithium Ion 6-cell													
Battery - life ¹⁰	<i>6-cell (48Whr):</i> up to 6.2 hr													
Chipset	AMD A76M FCH													
ExpressCard	None													
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
Ports	Three USB 3.0, one USB 2.0 (powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCle Mini Card WLAN ⁴	One PCI Express Mini Card slot <i>Some:</i> 11b/g/n, PCle Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11b/g/n, PCle Half Mini Card, ThinkPad 11b/g/n, Wi-Fi + Bluetooth combo adapter, 1x1													
WWAN	None													
Modem	None													
Bluetooth [™]	Bluetooth 4.0 wireless, integrated in selected WLAN PCle Half Mini Card													
Ethernet	Realtek [®] RTL8111F Gigabit Network Connection													
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2/ Stereo digital microphone or Mono digital microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	None													
Fingerprint reader	None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
US model(s) announced August 20, or October 15, 2013; or March 11, 2014

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ThinkPad S431

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ThinkPad S431 20AX (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20AX0000US	i3-3227U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	06/13
20AX0001US	i5-3337U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	06/13
20AX000MUS	i7-3687U	8GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	06/13
20AX000NUS	i3-3227U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20AX000PUS	i5-3337U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20AX000QUS	i7-3687U	8GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20AX000RUS	i3-3227U	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	Finger	4	46	Win7 Pro64	06/13
20AX000SUS	i3-3227U	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n + BT	None	Black	Finger	4	46	Win8 Pro64	06/13
20AX004KUS	i5-3437U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	11/13

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; one spindles Intel® Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit	
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket		Preloaded applications (only some listed) - Windows 7 models • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Adobe® Reader®	
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™		- Windows 8 models • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage	
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot		- All models • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate	
Widescreen display	14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio			
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator			
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); Max external resolution: 1920x1200 (HDMI) @60Hz			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None			
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.11" x 8.86" x 0.81"; 332.8mm x 224.8mm x 20.3mm 4-cell: from 3.92 lb (1.78kg) Black or silver (top); black bottom Sand Blast Aluminum Li-Polymer 4-cell (46Whr) MobileMark 2007: Windows 7: up to 9.1 hr MobileMark 2012: Windows 8: up to 5.9 hr			
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM76 Express Chipset None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)			
PCIe Mini Card PCIe WLAN ⁴ M.2 Card M.2 WWAN Bluetooth™ Ethernet Audio support	One PCI Express Mini Card slot 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2 One M.2 Card slot for support of WWAN card or SSD None Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card Realtek® RTL8111F Gigabit Network Connection High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant		Supports ThinkVantage® technologies	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor		65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		For Lenovo ²² service upgrade options, please go to S-EDGE sheet	

See footnotes for more detailed information
US model(s) announced June 4, or November 19, 2013

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(LBT1-1) November 2013

ThinkPad S431 20AX (AMD HD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ^a rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20AX003WUS	i3-3217U	4GBx1	14.0" HD+	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win7 Pro64	07/13

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; one spindles Intel® Core™ i3-3217U processor (2 cores, 1.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology			Preloaded operating system²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models <ul style="list-style-type: none">• Access Connections™• ThinkVantage Power Manager• ThinkVantage Tools• Adobe® Reader® - Windows 8 models <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage - All models <ul style="list-style-type: none">• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket			
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™			
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot			
Widescreen display	Some: 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio Some: 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio			
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator			
Graphics	AMD Radeon™ HD 8670M Graphics, 1GB memory external digital monitor support via HDMI™; <i>Max external resolution: 1920x1200 (HDMI)@60Hz</i>			
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys, LED backlight			
Touchpad ThinkLight™	TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None			
Dimensions ³	14.0W" (WxDxH): 13.11" x 8.86" x 0.81"; 332.8mm x 224.8mm x 20.3mm			
Weight ²	4-cell: from 3.92 lb (1.78kg)			
Case color	Black or silver (top); black bottom			
Case material	Sand Blast Aluminum			
Battery - type ³⁷	Li-Polymer 4-cell (46Whr)			
Battery - life ¹⁰	MobileMark 2007: Windows 7: up to 7.2 hr MobileMark 2012: Windows 8: up to 5.2 hr			
Chipset	Mobile Intel HM76 Express Chipset			
ExpressCard	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)			
PCIe Mini Card	One PCI Express Mini Card slot			
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2			
M.2 Card	One M.2 Card slot for support of WWAN card or SSD			
M.2 WWAN	None			
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card			
Ethernet	Realtek® RTL8111F Gigabit Network Connection			
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			
Supports ThinkVantage® technologies				
65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²				
For Lenovo ²² service upgrade options, please go to S-EDGE sheet				

See footnotes for more detailed information
US model(s) announced July 2, 2013

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD	Top color	Finger-print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20BA0000US	i5-3437U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13
20BA0001US	i7-3687U	8GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n + BT	24G	Black	Finger	4	46	Win8 Pro64	06/13

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindles</i> Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ - Windows 8 Pro 64-bit Preloaded applications (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket	
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™	
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot	
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio HD720p resolution, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); <i>Max external resolution: 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI) @60Hz</i>	
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None	
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.11" x 8.86" x 0.81"; 332.8mm x 224.8mm x 20.3mm 4-cell: from 3.92 lb (1.78kg) Black or silver (top); black bottom Sand Blast Aluminum Li-Polymer 4-cell (46Whr) <i>MobileMark 2007:</i> Windows 7: up to 9.1 hr <i>MobileMark 2012:</i> Windows 8: up to 5.9 hr	
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM76 Express Chipset None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN ⁴ M.2 Card M.2 WWAN Bluetooth™ Ethernet Audio support	One PCI Express Mini Card slot 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2 One M.2 Card slot for support of WWAN card or SSD None Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card Realtek® RTL8111F Gigabit Network Connection High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	Supports ThinkVantage® technologies 65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For Lenovo ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
US model(s) announced June 4, 2013

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ThinkPad S431 20AX (TopSeller) - MultiTouch

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD Top color	Finger print reader	Battery cells	Battery /Wh	Preload	Ann date (mm/yy)
20AX000VUS	i7-3687U	8GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13
20AX000TUS	i3-3227U	4GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13
20AX000UUS	i5-3337U	4GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; one spindles Intel® Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system ²⁰ - Windows 8 Pro 64-bit Preloaded applications (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™		
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, 10-point touch screen LED backlight, 220 nits, 16:9 aspect ratio		
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); <i>Max external resolution:</i> 1920x1200 (HDMI)@60Hz		
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch None		
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.10" x 8.85" x 0.87"; 332.8mm x 224.8mm x 22.1mm <i>4-cell:</i> from 4.10 lb (1.86kg) Black or silver (top); black bottom Sand Blast Aluminum Li-Polymer 4-cell (46Whr) <i>MobileMark 2007:</i> Windows 7: up to 6.7 hr <i>MobileMark 2012:</i> Windows 8: up to 4.9 hr		
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM76 Express Chipset None 4-in-1 reader (MMC, SD, SDHC, SDXC) One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ M.2 Card M.2 WWAN Bluetooth™ Ethernet Audio support Security Security chip Fingerprint reader	One PCI Express Mini Card slot 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2 One M.2 Card slot for support of WWAN card or SSD None Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card Realtek® RTL8111F Gigabit Network Connection High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Fingerprint reader on palm rest, swipe sensor		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For Lenovo ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
US model(s) announced August 13, 2013

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ThinkPad S431 20BA (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN / BT	M.2 Card WWAN /SSD Top color	Finger print reader	Bat-tery cells	Bat-tery /Wh	Preload	Ann date (mm/yy)
20BA0002US	i5-3437U	4GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13
20BA0003US	i7-3687U	8GBx1	14.0" HD+ Touch	720p	500G 7200	TP 11a/b/g/n + BT	24G Black	Finger	4	46	Win8 Pro64	08/13

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; one spindles Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system ²⁰ - Windows 8 Pro 64-bit Preloaded applications (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate
Memory	8GB max ⁷ / PC3-12800 1600MHz DDR3L, non-parity, one 204-pin SO-DIMM socket		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™		
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, 10-point touch screen LED backlight, 220 nits, 16:9 aspect ratio		
Camera	HD720p resolution, low light sensitive, fixed focus, LED indicator		
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via HDMI™ (supporting HDCP to output protected content); <i>Max external resolution:</i> 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI) @60Hz		
Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.10" x 8.85" x 0.87"; 332.8mm x 224.8mm x 22.1mm		
Weight ²	4-cell: from 4.10 lb (1.86kg)		
Case color	Black or silver (top); black bottom		
Case material	Sand Blast Aluminum		
Battery - type ³⁷	Li-Polymer 4-cell (46Whr)		
Battery - life ¹⁰	<i>MobileMark 2007:</i> Windows 7: up to 6.7 hr <i>MobileMark 2012:</i> Windows 8: up to 4.9 hr		
Chipset	Mobile Intel HM76 Express Chipset		
ExpressCard	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	One USB 3.0, one USB 3.0 (powered), OneLink Docking port (supports optional 4X10A06077) external monitor (HDMI), ethernet (RJ-45)		
PCIe Mini Card	One PCI Express Mini Card slot		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2		
M.2 Card	One M.2 Card slot for support of WWAN card or SSD		
M.2 WWAN	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in selected WLAN PCIe Half Mini Card		
Ethernet	Realtek® RTL8111F Gigabit Network Connection		
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1.5 watt x 2 / Dolby® Home Theater® v4 / dual array microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		
			Supports ThinkVantage® technologies
			65-watt AC adapter ENERGY STAR® compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
			For Lenovo ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
US model(s) announced August 13, 2013

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Lenovo Quick Pick (<http://www.lenovoquickpick.com>) is an options compatibility configurator for Lenovo systems.

For the options compatibility information on ThinkPad Laptops, please see below:

<u>ThinkPad L430</u> http://www.lenovoquickpick.com/usa/system/thinkpad/l-series/l430 <u>ThinkPad L530</u> http://www.lenovoquickpick.com/usa/system/thinkpad/l-series/l530	<u>ThinkPad L440</u> http://www.lenovoquickpick.com/usa/system/thinkpad/l-series/l440 <u>ThinkPad L540</u> http://www.lenovoquickpick.com/usa/system/thinkpad/l-series/l540
<u>ThinkPad T430, T430i</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t430-t430i <u>ThinkPad T430s, T430si</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t430s-t430si <u>ThinkPad T430u</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t430u <u>ThinkPad T431s</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t431s	<u>ThinkPad T440</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t440 <u>ThinkPad T440p Dual Core</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t440p-dual-core <u>ThinkPad T440p Quad Core</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t440p-quad-core <u>ThinkPad T440s</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t440s
<u>ThinkPad T530 Dual Core</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t530-dual-core <u>ThinkPad T530 Quad Core</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t530-quad-core <u>ThinkPad W530</u> http://www.lenovoquickpick.com/usa/system/thinkpad/w-series/w530	<u>ThinkPad T540p Dual Core</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t540p-dual-core <u>ThinkPad T540p Quad Core</u> http://www.lenovoquickpick.com/usa/system/thinkpad/t-series/t540p-quad-core <u>ThinkPad W540</u> http://www.lenovoquickpick.com/usa/system/thinkpad/w-series/w540
<u>ThinkPad X131e</u> http://www.lenovoquickpick.com/usa/system/thinkpad/x-series/x131e <u>ThinkPad X230</u> http://www.lenovoquickpick.com/usa/system/thinkpad/x-series/x230 <u>ThinkPad X230 Tablet, X230i Tablet</u> http://www.lenovoquickpick.com/usa/system/thinkpad/x-series/x230-tablet-x230i-tablet <u>ThinkPad X1 Carbon</u> http://www.lenovoquickpick.com/usa/system/thinkpad/x-series/x1-carbon	<u>ThinkPad X140e</u> http://www.lenovoquickpick.com/usa/system/thinkpad/x-series/x140e <u>ThinkPad X240</u> http://www.lenovoquickpick.com/usa/system/thinkpad/x-series/x240 <u>New ThinkPad X1 Carbon</u> http://www.lenovoquickpick.com/usa/system/thinkpad/x-series/x1-carbon-2nd-gen
<u>ThinkPad Edge E431</u> http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e431 <u>ThinkPad Edge E531</u> http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e531	<u>ThinkPad E440</u> http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e440 <u>ThinkPad E540</u> http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e540 <u>ThinkPad E545</u> http://www.lenovoquickpick.com/usa/system/thinkpad/e-series/edge-e545
	<u>ThinkPad S431</u> http://www.lenovoquickpick.com/usa/system/thinkpad/s-series/s431

ThinkPad L/T/W/X Series - TopSeller Services

Product Specifications Reference (PSREF)

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see: <http://www2.partnerinfo.lenovo.com/partners/us/resources/salestoolkit.shtml>

TopSeller service upgrade options for ThinkPad L/T/W/X Series		ThinkPad L440, L540, T440p, T540p, W540 with 1-year Depot warranty	
ThinkPad T430u notebook with 1-year Depot warranty		3 YEAR Depot Warranty	5WS0F31380
3 YEAR Depot Warranty with Battery Replacement	04W8702	3 YEAR Depot Warranty with ThinkPad Protection	5PS0F31382
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	04W8704	3 YEAR Onsite Warranty	5WS0F31384
3 YEAR Onsite Warranty with Battery Replacement	04W8703	3 YEAR Onsite Warranty with ThinkPad Protection	5PS0F31379
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W8705	ThinkPad L440, L540, T440p, T540p, W540 with 3-year Depot warranty	
ThinkPad T430u and X1 Carbon notebook with 3-year Depot warranty		3 YEAR Depot Warranty & ThinkPad Protection	5PS0F31385
3 YEAR Depot Warranty with Battery Replacement	04W8780	3 YEAR Onsite Warranty	5WS0F31381
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	04W8778	3 YEAR Onsite Warranty with ThinkPad Protection	5PS0F31383
3 YEAR Onsite Warranty with Battery Replacement	04W8777	ThinkPad L/T/W & X Series (except above) with 1-year Depot warranty	
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W8779	3 YEAR Depot Warranty	04W8692
ThinkPad X131e notebook with 1-year Depot warranty		3 YEAR Depot Warranty & ThinkPad Protection	04W8694
3 YEAR Depot Warranty	04W9345	3 YEAR Onsite Warranty	04W8693
3 YEAR Depot Warranty & ThinkPad Protection	04W9347	3 YEAR Onsite Warranty & ThinkPad Protection	04W8695
3 YEAR Onsite Warranty	04W9346	ThinkPad L/T/W & X Series (except above) with 3-year Depot warranty	
3 YEAR Onsite Warranty & ThinkPad Protection	04W9348	3 YEAR Depot Warranty & ThinkPad Protection	04W8697
ThinkPad X140e notebook with 1-year Depot warranty		3 YEAR Onsite Warranty	04W8696
3 YEAR Depot Warranty	5WS0E84861	3 YEAR Onsite Warranty & ThinkPad Protection	04W8698
3 YEAR Depot Warranty & ThinkPad Protection	5PS0E84854		
3 YEAR Onsite Warranty	5WS0E84896		
3 YEAR Onsite Warranty & ThinkPad Protection	5PS0E84963		
ThinkPad X Series Tablet with 1-year Depot warranty			
3 YEAR Depot Warranty & ThinkPad Protection	04W8781		
3 YEAR Onsite Warranty & ThinkPad Protection	04W8782		
ThinkPad X Series Tablet with 3-year Depot warranty			
3 YEAR Depot Warranty & ThinkPad Protection	04W8700		
3 YEAR Onsite Warranty	04W8699		
3 YEAR Onsite Warranty & ThinkPad Protection	04W8701		
ThinkPad T431s, T440, T440s, and X240 with 1-year Depot warranty			
3 YEAR Depot Warranty with Battery Replacement	5WS0A14097		
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	5PS0A14104		
3 YEAR Onsite Warranty with Battery Replacement	5WS0A14112		
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	5PS0A14076		
ThinkPad T431s, T440, T440s, and X240 with 3-year Depot warranty			
3 YEAR Priority Support with Battery Replacement	5WS0A23090		
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	5PS0A23217		
3 YEAR Onsite Warranty with Battery Replacement	5WS0A22876		
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	5PS0A22983		
TopSeller Priority Support			
• 24x7 support with priority routing and advanced level technicians			
ThinkPad L440, L540, T431s, T440, T440s, T540p, W540, and X240 notebook with 1-year Depot warranty			
Add to 1-year warranty coverage - 3-year Priority Support*	5WS0A14092		
ThinkPad L440, L540, T431s, T440, T440s, T540p, W540, and X240 notebook with 3-year Depot warranty			
Add to 3-year warranty coverage - 3-year Priority Support*	5WS0A22833		
ThinkPad L/T/W/X Series (except X131e, X140e, and above) notebook with 1-year or 3-year Depot warranty			
Add to 1-year or 3-year warranty coverage - 3-year Priority Support*	04W8720		
* Covered machine must have concurrent warranty coverage.			

Partial list of Lenovo Services²² for ThinkPad notebooksFor more information see: http://www.lenovo.com/services_warranty/us/en/index.html

Lenovo service upgrade options for ThinkPad L/T/W/X Series		ThinkPad W/X series (except above) and T430u notebook with 1-year Depot warranty	
ThinkPad L440, L540, T431s, T440, T440s, T440p, T540p, W540, and X240 notebook with 1-year Depot warranty		2 YEAR Depot Warranty	41C9169
2 YEAR Depot Warranty	5WS0A14073	3 YEAR Depot Warranty	41C9170
3 YEAR Depot Warranty	5WS0A14081	4 YEAR Depot Warranty	41C9172
4 YEAR Depot Warranty	5WS0A14096	5 YEAR Depot Warranty	41C9174
5 YEAR Depot Warranty	5WS0A14108	1 YEAR Onsite Warranty	41C9166
1 YEAR Onsite Warranty	5WS0A14072	2 YEAR Onsite Warranty	41C9167
2 YEAR Onsite Warranty	5WS0A14078	3 YEAR Onsite Warranty	41C9168
3 YEAR Onsite Warranty	5WS0A14086	4 YEAR Onsite Warranty	41C9171
4 YEAR Onsite Warranty	5WS0A14093	5 YEAR Onsite Warranty	41C9173
5 YEAR Onsite Warranty	5WS0A14083	ThinkPad W/X series (except above) and T430u notebook with 3-year Depot warranty	
ThinkPad L440, L540, T431s, T440, T440s, T440p, T540p, W540, and X240 notebook with 3-year Depot warranty		4 YEAR Depot Warranty	41C9178
4 YEAR Depot Warranty	5WS0A23259	5 YEAR Depot Warranty	41C9180
5 YEAR Depot Warranty	5WS0A23002	3 YEAR Onsite Warranty	41C9176
3 YEAR Onsite Warranty	5WS0A23006	4 YEAR Onsite Warranty	41C9177
4 YEAR Onsite Warranty	5WS0A22852	5 YEAR Onsite Warranty	41C9179
5 YEAR Onsite Warranty	5WS0A23078	ThinkPad W/X series (except above) and T430u notebook with 3-year Onsite warranty	
ThinkPad L440, L540, T431s, T440, T440s, T440p, T540p, W540, and X240 notebook with 3-year Onsite warranty		4 YEAR Onsite Warranty	12X5630
4 YEAR Onsite Warranty	5WS0A23136	5 YEAR Onsite Warranty	43R2162
5 YEAR Onsite Warranty	5WS0A22893	Lenovo Priority Support for enterprise customers	
ThinkPad T/L series (except T430u & above) w/ 1-year Depot warranty		• 24x7 support with priority routing and advanced level technicians	
2 YEAR Depot Warranty	45K5971	ThinkPad notebook with 1-year Depot warranty	
3 YEAR Depot Warranty	45K5972	Add to 3-year warranty coverage - 3-year Priority Support*	45J9094
4 YEAR Depot Warranty	45K5974	ThinkPad notebook with 3-year Depot warranty	
5 YEAR Depot Warranty	45K5976	Add to 3-year warranty coverage - 3-year Priority Support*	45J9095
1 YEAR Onsite Warranty	45K5968	Add to 4-year warranty coverage - 4-year Priority Support*	45J9096
2 YEAR Onsite Warranty	45K5969	Add to 5-year warranty coverage - 5-year Priority Support*	45J9097
3 YEAR Onsite Warranty	45K5970	ThinkPad notebook with 3-year Onsite (GMP) warranty	
4 YEAR Onsite Warranty	45K5973	Add to 3-year warranty coverage - 3-year Priority Support*	45J9098
5 YEAR Onsite Warranty	45K5975	Add to 4-year warranty coverage - 4-year Priority Support*	45J9099
ThinkPad T/L series (except T430u & above) w/ 3-year Depot warranty		Add to 5-year warranty coverage - 5-year Priority Support*	45J9100
4 YEAR Depot Warranty	45K6023	ThinkPad Workstation notebook with 1-year Depot warranty	
5 YEAR Depot Warranty	45K6025	Add to 3-year warranty coverage - 3-year Priority Support*	45J9107
3 YEAR Onsite Warranty	45K6021	ThinkPad Workstation notebook with 3-year Depot warranty	
4 YEAR Onsite Warranty	45K6022	Add to 3-year warranty coverage - 3-year Priority Support*	45J9108
5 YEAR Onsite Warranty	45K6024	Add to 4-year warranty coverage - 4-year Priority Support*	45J9109
ThinkPad T/L series (except T430u & above) w/ 3-year Onsite warranty		Add to 5-year warranty coverage - 5-year Priority Support*	45J9110
4 YEAR Onsite Warranty	45K6038	ThinkPad Workstation notebook with 3-year Onsite (GMP) warranty	
5 YEAR Onsite Warranty	43R2162	Add to 3-year warranty coverage - 3-year Priority Support*	45J9111
ThinkPad X131e notebook with 1-year Depot warranty		Add to 4-year warranty coverage - 4-year Priority Support*	45J9112
2 YEAR Depot Warranty	04W9142	Add to 5-year warranty coverage - 5-year Priority Support*	45J9113
3 YEAR Depot Warranty	04W9146	* Covered machine must have concurrent warranty coverage.	
1 YEAR Onsite Warranty	04W9140		
2 YEAR Onsite Warranty	04W9144		
3 YEAR Onsite Warranty	04W9148		
4 YEAR Onsite Warranty	04W9151		
ThinkPad X140e notebook with 1-year Depot warranty			
2 YEAR Depot Warranty	5WS0E84931		
3 YEAR Depot Warranty	5WS0E84849		
4 YEAR Depot Warranty	5WS0E84841		
5 YEAR Depot Warranty	5WS0E84879		
1 YEAR Onsite Warranty	5WS0E84852		
2 YEAR Onsite Warranty	5WS0E84910		
3 YEAR Onsite Warranty	5WS0E84907		
5 YEAR Onsite Warranty	5WS0E84924		
ThinkPad X1 Carbon notebook with 3-year Depot warranty			
3 YEAR Depot Warranty with Battery Replacement	04W7783		
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	04W7785		
3 YEAR Onsite Warranty with Battery Replacement	04W8259		
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W8261		
ThinkPad X1 Carbon notebook with 3-year Onsite warranty			
3 YEAR Onsite Warranty with Battery Replacement	04W7787		
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W7789		

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:

<http://www2.partnerinfo.lenovo.com/partners/us/resources/salestoolkit.shtml>

TopSeller service upgrade options for ThinkPad E/S Series

ThinkPad Edge E431/E531 notebooks with 1-year Depot warranty

2 YEAR Depot Warranty	5WS0A23679
3 YEAR Depot Warranty	5WS0A23741
3 YEAR Depot Warranty & Accidental Damage Protection	5PS0A23716

2 YEAR Onsite Warranty	5WS0A23708
3 YEAR Onsite Warranty	5WS0A23776

ThinkPad S3 S431 notebooks with 1-year Depot warranty

3 YEAR Depot Warranty with Battery Replacement & Accidental Damage Protection	5PS0A14104
3 YEAR Onsite Warranty with Battery Replacement & Accidental Damage Protection	5WS0A14076

TopSeller Priority Support

- 24x7 support with priority routing and advanced level technicians

ThinkPad Edge E431/E531 notebooks with 1-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	5WS0A23257
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ThinkPad S3 S431 notebooks with 1-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	5WS0A14092
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* Covered machine must have concurrent warranty coverage.

Partial list of Lenovo® Services²² for ThinkPad E/Twist/S series notebooks
For more information see: http://www.lenovo.com/services_warranty/us/en/index.html

Lenovo service upgrade options for ThinkPad E/S series

ThinkPad Edge E431/E531/E545 notebooks with 1-year Depot warranty

2 YEAR Depot Warranty	5WS0A23781
3 YEAR Depot Warranty	5WS0A23813
2 YEAR Onsite Warranty	5WS0A23747
3 YEAR Onsite Warranty	5WS0A23681

ThinkPad E440/E540 notebooks with 1-year Depot warranty

2 YEAR Depot Warranty	5WS0A23781
3 YEAR Depot Warranty	5WS0A23813
2 YEAR Onsite Warranty	5WS0A23747
3 YEAR Onsite Warranty	5WS0A23681

ThinkPad S3 S431 notebooks with 1-year Depot warranty

2 YEAR Depot Warranty	5WS0A14073
3 YEAR Depot Warranty	5WS0A14081
2 YEAR Onsite Warranty	5WS0A14078
3 YEAR Onsite Warranty	5WS0A14086

Disclaimer

Lenovo provides the information in the Product Specifications Reference (PSREF) withdrawn product books on an "AS-IS" basis. Because the actual products have been withdrawn from marketing, the information in these withdrawn product books is no longer maintained or updated. The referenced footnote numbering may not correspond with the listed footnotes.

PSREF books for the withdrawn systems:

http://www.lenovo.com/psref/psrefs_withdrawn.html

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, go to http://support.lenovo.com/en_US/product-service/warranty-status/WarrantyPolicies.page. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

- ¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
- ² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
- ³ **Thinness** may vary at certain points on the system.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- ⁵ **TAA:** ThinkPad notebook is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.
- ⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
- ⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.
- ⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ⁹ **CD/DVD drive speeds** list maximum rates; rates are variable and are often less than the maximum.
- ¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2012 during testing. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- ¹¹ **External monitor:** This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.
- ¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ¹³ **Internet access not included.**
- ¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.
- ¹⁶ **Activating Verizon Wireless Service:** Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service, airtime, and early termination charges may apply. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.
- ¹⁷ **International Warranty Service (IWS)** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For ThinkPad notebooks with Depot or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.
- ¹⁹ **Depot repair service:** The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.
- ²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.
- ²¹ **For combination drives,** maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.

²² **Lenovo Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. For ThinkPad notebooks requiring LCD or other component replacement, Lenovo may choose to perform service at the depot repair center. Calls must be received by 5 pm local time in order to qualify for Next Business Day service. P&L means parts and labor. P/U means pick-up. See Lenovo Warranty Services terms and conditions for complete details and restrictions.

²³ **Activating AT&T Wireless Service:** Requires separate agreement with AT&T, subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

²⁴ **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

²⁶ **Full-size keyboard:** As defined by ISO/IEC 15412.

²⁷ **Based on IEEE 802.11a and 802.11b.** A customer can not upgrade to a different wireless Mini PCI adapter due to FCC regulations. Security screws prevent removal of this adapter. This wireless LAN product has been designed to permit legal operation world-wide in regions which it is approved. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

³⁰ **Measures only maximum** data transfer rate, not application performance. Many factors affect application performance.

³² **Wireless:** Based on IEEE 802.11a, 802.11b, and 802.11g respectively. An adapter with 11a/b, 11b/g, or 11a/b/g can communicate on either/any of these listed formats respectively, the actual connection will be based on the access point to which it connects.

³⁶ **Wireless upgradable** allows the system to be wireless-enabled with an optional wireless Mini PCI or Mini PCI Express card. Designed to operate only with Lenovo options.

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Visit www.lenovo.com/safecomputing periodically for the latest information on safe and effective computing.

Visit www.lenovo.com/psref for the latest version of Product Specifications Reference.

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Version 451, March 2014

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

Additions in this update

► New product(s)

None

► New model(s)

ThinkPad Yoga new models announced March 2014 (STLA1-4)

► Others

Create ThinkPad Tablets and Convertibles Accessories - Lenovo Quick Pick

Changes in this update

► None

Lenovo Quick Pick (<http://www.lenovoquickpick.com>) is an options compatibility configurator for Lenovo systems.

For more information on the various ThinkPad systems, please see below:

ThinkPad 8

<http://www.lenovoquickpick.com/usa/system/thinkpad/tablet/thinkpad-8>

ThinkPad Tablet 2

<http://www.lenovoquickpick.com/usa/system/thinkpad/tablet/tablet-2>

ThinkPad Helix

<http://www.lenovoquickpick.com/usa/system/thinkpad/other-thinkpad/helix>

ThinkPad Yoga

<http://www.lenovoquickpick.com/usa/system/thinkpad/other-thinkpad/yoga>

ThinkPad Twist S230u

<http://www.lenovoquickpick.com/usa/system/thinkpad/s-series/twist-s230u>



Lenovo® ThinkPad 8



Lenovo ThinkPad 8



Lenovo ThinkPad 8



Lenovo ThinkPad 8



Lenovo ThinkPad 8



Lenovo ThinkPad 8

ThinkPad 8 (20BN) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Camera Front/Rear (MP)	Bluetooth Keyboard w/ Stand	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Blue-tooth	Preload	Ann Date (mm/yy)
20BN000VUS	Atom Z3770	2GB	8.3" WUXGA	128G	2.0/8.0	None	11a/b/g/n ²⁸	None	None	None	BT	Win8.1 32	01/14
20BN000UUS	Atom Z3770	2GB	8.3" WUXGA	64G	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8.1 32	01/14
20BN001RUS	Atom Z3770	2GB	8.3" WUXGA	128G	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8.1 Pro32	01/14
20BN002DUS	Atom Z3770	2GB	8.3" WUXGA	64G	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8.1 Pro32	01/14

Positioning	Touchscreen tablet for on-the-go business		Preloaded operating system ²⁰ - Some: Windows® 8.1 32-bit - Some: Windows 8.1 Pro 32-bit Preloaded applications ¹⁴ (only some listed) • Lenovo Support • Lenovo Companion • Norton™ Internet Security (30 days of virus definitions) • ThinkVantage System Update • AccuWeather • Evernote® • Nitro PDF • Amazon Kindle
Processor	Intel® Atom™ Processor Z3770 (4 cores, 2.40GHz, 2MB cache), LPDDR3 memory controller (1067MHz)		
Memory	2GB / 1067MHz LPDDR3, mobile DDR / soldered to systemboard, no sockets		
Storage	64GB or 128GB / eMMC (embedded Multi Media Card) flash memory on board		
Storage extension	One microSD Card slot, supports up to 64GB		
Graphics	Intel HD graphics in Intel Atom SoC, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant		
Display	8.3" (210.8mm) WUXGA (1920x1200) TFT color , smudgeless display with infinity AGC Dragontrail™ Glass, LED backlight, 370 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, WideView (160° viewing), MultiTouch screen supports 10-finger gesture		
Tablet pen	None		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 8.0-megapixel, auto focus, flash LED		
Video capture	1080p video capture		
Audio support	Realtek® ALC5672 codec / stereo speakers, 0.5 watt x 2 / dual array digital microphone, combo audio/microphone jack		
Media capable	Audio formats: MP3, AAC, AAC+, AC3, PCM, WMA, WAV, AVI Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Motion-JPG		
Control buttons	Windows button, Power button, volume control button, reset switch		
Light sensor	Ambient Light Sensor, ISL29023		
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, AK8963C		
Gyroscope	InvenSense MPU6050		
Platform	Intel Atom Z3770 SoC (System on Chip) platform		
Ports	One micro-USB 3.0, one micro-HDMI, headphone/microphone combo jack		
WLAN ⁴	11a/b/g/n ²⁸ wireless, ThinkPad 11a/b/g/n, 1x1, WiFi + Bluetooth combo chip		
WWAN	None		
Carrier	None		
GNSS	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in WiFi + Bluetooth combo chip		
NFC	None		
Dimensions ³	8.83" x 5.20" x 0.35"; 224.3mm x 132.0mm x 8.8mm		10-watt AC adapter (via micro-USB) GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Weight ²	<i>WiFi only:</i> from 0.95 lb (0.43kg)		
Case color	Black		
Case material	ALuminium top cover, Edge Profile Rubber		
Battery - type	Lithium Polymer, 20.5Whr		For Lenovo service ²² upgrade options, please go to S-Tablet sheet
Battery - life ¹⁰	up to 17 days (standby); up to 8.0 hr (web browsing with flash)		
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) announced January 28, 2014

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ThinkPad 8 (20BQ)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Camera Front/Rear (MP)	Bluetooth Keyboard w/ Stand	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Blue-tooth	Preload	Ann Date (mm/yy)
20BQ000KUS	Atom Z3770	2GB	8.3" WUXGA	64G	2.0/8.0	None	11a/b/g/n ²⁸	None	None	None	BT	Win8.1 32	01/14
20BQ000LUS	Atom Z3770	2GB	8.3" WUXGA	128G	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8.1 32	01/14
20BQ0012US	Atom Z3770	2GB	8.3" WUXGA	128G	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8.1 Pro32	01/14
20BQ0015US	Atom Z3770	2GB	8.3" WUXGA	64G	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8.1 Pro32	01/14

Positioning	Touchscreen tablet for on-the-go business		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 8.1 32-bit - <i>Some:</i> Windows 8.1 Pro 32-bit Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Norton™ Internet Security (30 days of virus definitions)• ThinkVantage System Update• AccuWeather• Evernote®• Nitro PDF• Amazon Kindle
Processor	Intel® Atom™ Processor Z3770 (4 cores, 2.40GHz, 2MB cache), LPDDR3 memory controller (1067MHz)		
Memory	2GB / 1067MHz LPDDR3, mobile DDR / soldered to systemboard, no sockets		
Storage	64GB or 128GB / eMMC (embedded Multi Media Card) flash memory on board		
Storage extension	One microSD Card slot, supports up to 64GB		
Graphics	Intel HD graphics in Intel Atom SoC, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant		
Display	8.3" (210.8mm) WUXGA (1920x1200) TFT color , smudgeless display with infinity AGC Dragontrail™ Glass, LED backlight, 370 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, WideView (160° viewing), MultiTouch screen supports 10-finger gesture		
Tablet pen	None		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 8.0-megapixel, auto focus, flash LED		
Video capture	1080p video capture		
Audio support	Realtek® ALC5672 codec / stereo speakers, 0.5 watt x 2 / dual array digital microphone, combo audio/microphone jack		
Media capable	Audio formats: MP3, AAC, AAC+, AC3, PCM, WMA, WAV, AVI Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Motion-JPG		
Control buttons	Windows button, Power button, volume control button, reset switch		
Light sensor	Ambient Light Sensor, ISL29023		
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, AK8963C		
Gyroscope	InvenSense MPU6050		
Platform	Intel Atom Z3770 SoC (System on Chip) platform		
Ports	One micro-USB 3.0, one micro-HDMI, headphone/microphone combo jack		
WLAN ⁴	11a/b/g/n ²⁸ wireless, ThinkPad 11a/b/g/n, 1x1, WiFi + Bluetooth combo chip		
WWAN	None		
Carrier	None		
GNSS	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in WiFi + Bluetooth combo chip		
NFC	None		
Dimensions ³	8.83" x 5.20" x 0.35"; 224.3mm x 132.0mm x 8.8mm		10-watt AC adapter (via micro-USB) GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
Weight ²	<i>WiFi only:</i> from 0.95 lb (0.43kg)		
Case color	Black		
Case material	ALuminium top cover, Edge Profile Rubber		
Battery - type	Lithium Polymer, 20.5Whr		For Lenovo service ²² upgrade options, please go to S-Tablet sheet
Battery - life ¹⁰	up to 17 days (standby); up to 8.0 hr (web browsing with flash)		
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) announced January 28, 2014

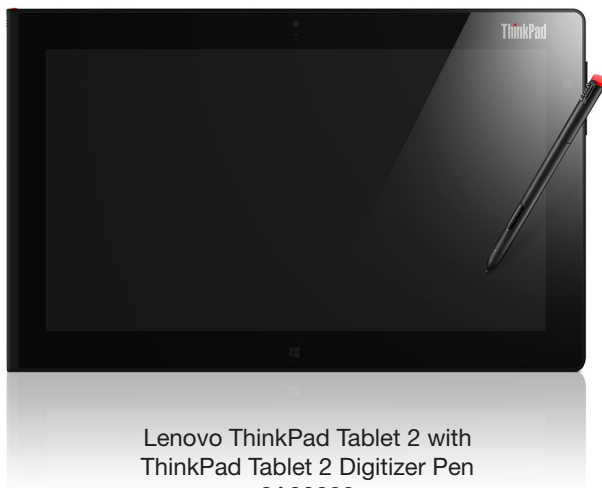
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Lenovo® ThinkPad Tablet 2



Lenovo ThinkPad Tablet 2



Lenovo ThinkPad Tablet 2 with
ThinkPad Tablet 2 Digitizer Pen
0A33899



Lenovo ThinkPad Tablet 2 with
ThinkPad Tablet 2 Dock
0B47109



Lenovo ThinkPad Tablet 2 with
ThinkPad In-Ear Headphones with microphone
57Y4488



Lenovo ThinkPad Tablet 2 with
ThinkPad Tablet 2 Dock
0B47109



Lenovo® ThinkPad Tablet 2 with
ThinkPad Tablet 2 Bluetooth Keyboard with Stand
0B47270



Lenovo ThinkPad Tablet 2 with
ThinkPad Tablet 2 Fitted Sleeve
0A33902



Lenovo ThinkPad Tablet 2 with
ThinkPad Tablet 2 VGA Adapter
0B47084



Lenovo ThinkPad Tablet 2 with
ThinkPad Tablet 2 Fitted Sleeve
0A33902



Lenovo ThinkPad Tablet 2 with
ThinkPad Tablet 2 Bluetooth Keyboard with Stand
0B47270



ThinkPad Tablet 2 Dock
0B47109

ThinkPad Tablet 2 (3679) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Tablet Pen	Camera Front/Rear (MP)	Bluetooth Keyboard w/ Stand	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Blue-tooth	Preload	Ann Date (mm/yy)
3679-23U	Atom Z2760	2GB	10.1" HD	64G	No	2.0/8.0	None	11a/b/g/n ²⁸	None	None	None	BT	Win8 32	10/12
3679-26U	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8 32	10/12
3679-27U	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8 Pro32	10/12
3679-28U	Atom Z2760	2GB	10.1" HD	64G	No	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8 Pro32	10/12
3679-4JU	Atom Z2760	2GB	10.1" HD	64G	No	2.0/8.0	None	11a/b/g/n	Gobi 4000	AT&T	None	BT	Win8 Pro32	12/12
3679-22U	Atom Z2760	2GB	10.1" HD	32G	No	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8 32	01/13
3679-5HU	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	Gobi 4000	AT&T	NFC	BT	Win8 Pro32	03/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Touchscreen tablet for on-the-go business		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 8 32-bit - <i>Some:</i> Windows 8 Pro 32-bit Preloaded applications ¹⁴ (only some listed) • Lenovo® Settings • Lenovo Support • Lenovo Companion • Lenovo QuickSnip • AT&T® All Access • Lenovo Cloud Storage by SugarSync • Password Manager • Norton™ Internet Security 2012 (30 days of virus definitions) • ThinkVantage System Update • AccuWeather • Evernote® • Nitro PDF • Skype™ • Amazon Kindle
Processor	Intel® Atom™ Processor Z2760 (2 cores, 1.80GHz, 1MB cache), LPDDR2 memory controller (800MHz), HT technology		
Memory	2GB / 800MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets		
Storage	32GB or 64GB / eMMC (embedded Multi Media Card) flash memory on board		
Storage extension	One microSD Card slot, supports up to 32GB		
Graphics	PowerVR™ SGX545 graphics in Intel Atom SoC, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant		
Display	10.1" (256.5mm) HD (1366x768) TFT color , anti-reflective display with infinity AGC Dragontrail™ Glass, LED backlight, 400 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports five-finger gesture		
Tablet pen	<i>Some:</i> ThinkPad Tablet 2 Digitizer Pen (0A33899), supports hover, tip, and pressure modes / a button for selection / no batteries required *The models without Tablet Pen can not support pen input function via optional ThinkPad Tablet 2 Digitizer Pen (0A33899)		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 8.0-megapixel, auto focus, flash LED		
Video capture	720p video capture		
Audio support	Realtek® ALC5642 codec / stereo speakers, 0.5 watt x 2 / dual array digital microphone, combo audio/microphone jack		
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid		
Control buttons	Windows button, Power button, volume control button, rotation lock switch, reset switch		
Bluetooth	<i>Some:</i> ThinkPad Tablet 2 Bluetooth Keyboard with Stand (0B47270), 6-row, TrackPoint® pointing device w/ three mouse buttons, landscape stand included, connects system via bluetooth, sealed battery with 30-day battery life, chargeable via micro-USB (one USB to micro-USB cable included)		
Keyboard with Stand			
Light sensor	Ambient Light Sensor, Capella CM3218		
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, STMicroelectronics LSM303DLHC		
Gyroscope	3-axis gyroscope, STMicroelectronics L3G4200D		
Platform	Intel Atom Z2760 SoC (System on Chip) platform		
Ports	One USB 2.0, one micro-USB 2.0 (only for power supply / charging), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet 2 Dock connector		
WLAN ⁴	11a/b/g/n ²⁸ wireless, ThinkPad 11a/b/g/n, 1x1, WiFi + Bluetooth combo chip		
WWAN	<i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 4000 chipset, LTE (4G), WCDMA/HSPA/HSPA+		
Carrier	<i>Some:</i> AT&T® LTE (4G), contract required with service provider		
GNSS	Global Navigation Satellite System		
Bluetooth™	Bluetooth 4.0 wireless, integrated in WiFi + Bluetooth combo chip		
NFC	<i>Some:</i> Near Field Communication, easy for two devices to communicate with each other		
Dimensions ³	10.34" x 6.48" x 0.39"; 262.6mm x 164.6mm x 9.8mm		
Weight ²	<i>WiFi only:</i> from 1.26 lb (0.57kg); <i>WiFi + Digitizer Pen:</i> from 1.30 lb (0.59kg); <i>WiFi + Digitizer Pen + WWAN:</i> from 1.35 lb (0.61kg)		
Case color	Black		
Case material	Magnesium frame, PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) cover		
Battery - type	Lithium Polymer, 30Whr		
Battery - life ¹⁰	up to 25 days (standby); up to 150 hr (MP3 playback); up to 10 hr (web browsing with flash); up to 10 hr (local video playback)		
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available		
10-watt AC adapter (via micro-USB) GREENGUARD® certified RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
For compatible accessories, please go to O-Tablet-2 sheet; For Lenovo service ²² upgrade options, please go to S-Tablet sheet			

See footnotes for more detailed information
US model(s) announced October 23 or December 18, 2012, or January 15 or March 5, 2013

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ThinkPad Tablet 2 (3679) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Tablet Pen	Camera Front/Rear (MP)	Bluetooth Keyboard w/ Stand	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Bluetooth	Preload	Ann Date (mm/yy)
3679-5YU	Atom Z2760	2GB	10.1" HD	64G	No	2.0/8.0	None	11a/b/g/n ²⁸	None	None	None	BT	Win8 32	04/13
3679-5XU	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	Gobi 4000	AT&T	NFC	BT	Win8 32	04/13
3679-5VU	Atom Z2760	2GB	10.1" HD	64G	No	2.0/8.0	None	11a/b/g/n	Gobi 4000	AT&T	NFC	BT	Win8 32	04/13
3679-5QU	Atom Z2760	2GB	10.1" HD	64G	No	2.0/8.0	None	11a/b/g/n	None	None	NFC	BT	Win8 32	04/13
3679-5PU	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	None	None	NFC	BT	Win8 32	04/13
3679-5MU	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	None	None	None	BT	Win8 32	04/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Touchscreen tablet for on-the-go business		Preloaded operating system ²⁰ - Windows® 8 32-bit Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Microsoft Office Home and Student (included in Windows 8)• Lenovo® Settings• Lenovo Support• Lenovo Companion• Lenovo QuickSnip• AT&T® All Access• Lenovo Cloud Storage by SugarSync• Password Manager• Norton™ Internet Security 2012 (30 days of virus definitions)• ThinkVantage System Update• AccuWeather• Evernote®• Nitro PDF• Skype™• Amazon Kindle
Processor	Intel® Atom™ Processor Z2760 (2 cores, 1.80GHz, 1MB cache), LPDDR2 memory controller (800MHz), HT technology		
Memory	2GB / 800MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets		
Storage	32GB or 64GB / eMMC (embedded Multi Media Card) flash memory on board		
Storage extension	One microSD Card slot, supports up to 32GB		
Graphics	PowerVR™ SGX545 graphics in Intel Atom SoC, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant		
Display	10.1" (256.5mm) HD (1366x768) TFT color, anti-reflective display with infinity AGC Dragontrail™ Glass, LED backlight, 400 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports five-finger gesture		
Tablet pen	<i>Some:</i> ThinkPad Tablet 2 Digitizer Pen (0A33899), supports hover, tip, and pressure modes / a button for selection / no batteries required * The models without Tablet Pen can not support pen input function via optional ThinkPad Tablet 2 Digitizer Pen (0A33899)		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 8.0-megapixel, auto focus, flash LED		
Video capture	720p video capture		
Audio support	Realtek® ALC5642 codec / stereo speakers, 0.5 watt x 2 / dual array digital microphone, combo audio/microphone jack		
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid		
Control buttons	Windows button, Power button, volume control button, rotation lock switch, reset switch		
Bluetooth	<i>Some:</i> ThinkPad Tablet 2 Bluetooth Keyboard with Stand (0B47270), 6-row, TrackPoint® pointing device w/ three mouse buttons, landscape stand included, connects system via bluetooth, sealed battery with 30-day battery life, chargeable via micro-USB (one USB to micro-USB cable included)		
Keyboard with Stand			
Light sensor	Ambient Light Sensor, Capella CM3218		
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, STMicroelectronics LSM303DLHC		
Gyroscope	3-axis gyroscope, STMicroelectronics L3G4200D		
Platform	Intel Atom Z2760 SoC (System on Chip) platform		
Ports	One USB 2.0, one micro-USB 2.0 (only for power supply / charging), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet 2 Dock connector		
WLAN ⁴	11a/b/g/n ²⁸ wireless, ThinkPad 11a/b/g/n, 1x1, WiFi + Bluetooth combo chip		
WWAN	<i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 4000 chipset, LTE (4G), WCDMA/HSPA/HSPA+		
Carrier	<i>Some:</i> AT&T® LTE (4G), contract required with service provider		
GNSS	Global Navigation Satellite System		
Bluetooth™	Bluetooth 4.0 wireless, integrated in WiFi + Bluetooth combo chip		
NFC	<i>Some:</i> Near Field Communication, easy for two devices to communicate with each other		
Dimensions ³	10.34" x 6.48" x 0.39"; 262.6mm x 164.6mm x 9.8mm		
Weight ²	<i>WiFi only:</i> from 1.26 lb (0.57kg); <i>WiFi + Digitizer Pen:</i> from 1.30 lb (0.59kg); <i>WiFi + Digitizer Pen + WWAN:</i> from 1.35 lb (0.61kg)		
Case color	Black		
Case material	Magnesium frame, PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) cover		
Battery - type	Lithium Polymer, 30Whr		
Battery - life ¹⁰	up to 25 days (standby); up to 150 hr (MP3 playback); up to 10 hr (web browsing with flash); up to 10 hr (local video playback)		
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) announced April 30, 2013

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ThinkPad Tablet 2 (3682)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Tablet Pen	Camera Front/Rear (MP)	Bluetooth Keyboard w/ Stand	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Global (G) Blue-tooth (P)	Preload	Ann Date (mm/yy)	
3682-28U	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n ²⁸	None	None	None	BT	G	Win8 Pro32	10/12
3682-29U	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	None	None	NFC	BT	G	Win8 Pro32	10/12
3682-22U	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	Gobi 4000	AT&T	NFC	BT		Win8 Pro32	12/12
3682-2AU	Atom Z2760	2GB	10.1" HD	64G	Pen	2.0/8.0	None	11a/b/g/n	Gobi 4000	AT&T	NFC	BT		Win8 Pro32	12/12

Positioning	Touchscreen tablet for on-the-go business		Preloaded operating system ²⁰ - Windows® 8 Pro 32-bit Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Settings• Lenovo Support• Lenovo Companion• Lenovo QuickSnap• AT&T® All Access• Lenovo Cloud Storage by SugarSync• Password Manager• Norton™ Internet Security 2012 (30 days of virus definitions)• ThinkVantage System Update• AccuWeather• Evernote®• Nitro PDF• Skype™• Amazon Kindle
Processor	Intel® Atom™ Processor Z2760 (2 cores, 1.80GHz, 1MB cache), LPDDR2 memory controller (800MHz), HT technology		
Memory	2GB / 800MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets		
Storage	32GB or 64GB / eMMC (embedded Multi Media Card) flash memory on board		
Storage extension	One microSD Card slot, supports up to 32GB		
Graphics	PowerVR™ SGX545 graphics in Intel Atom SoC, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant		
Display	10.1" (256.5mm) HD (1366x768) TFT color, anti-reflective display with infinity AGC Dragontrail™ Glass, LED backlight, 400 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports five-finger gesture		
Tablet pen	ThinkPad Tablet 2 Digitizer Pen (0A33899), supports hover, tip, and pressure modes / a button for selection / no batteries required * The models without Tablet Pen can not support pen input function via optional ThinkPad Tablet 2 Digitizer Pen (0A33899)		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 8.0-megapixel, auto focus, flash LED		
Video capture	720p video capture		
Audio support	Realtek® ALC5642 codec / stereo speakers, 0.5 watt x 2 / dual array digital microphone, combo audio/microphone jack		
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid		
Control buttons	Windows button, Power button, volume control button, rotation lock switch, reset switch		
Bluetooth	<i>Some:</i> ThinkPad Tablet 2 Bluetooth Keyboard with Stand (0B47270),		
Keyboard with Stand	6-row, TrackPoint® pointing device w/ three mouse buttons, landscape stand included, connects system via bluetooth, sealed battery with 30-day battery life, chargeable via micro-USB (one USB to micro-USB cable included)		
Light sensor	Ambient Light Sensor, Capella CM3218		
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, STMicroelectronics LSM303DLHC		
Gyroscope	3-axis gyroscope, STMicroelectronics L3G4200D		
Platform	Intel Atom Z2760 SoC (System on Chip) platform		
Ports	One USB 2.0, one micro-USB 2.0 (only for power supply / charging), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet 2 Dock connector		
WLAN ⁴	11a/b/g/n ²⁸ wireless, ThinkPad 11a/b/g/n, 1x1, WiFi + Bluetooth combo chip		
WWAN	<i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 4000 chipset, LTE (4G), WCDMA/HSPA/HSPA+		
Carrier	<i>Some:</i> AT&T® LTE (4G), contract required with service provider		
GNSS	Global Navigation Satellite System		
Bluetooth™	Bluetooth 4.0 wireless, integrated in WiFi + Bluetooth combo chip		
NFC	<i>Some:</i> Near Field Communication, easy for two devices to communicate with each other		
Dimensions ³	10.34" x 6.48" x 0.39"; 262.6mm x 164.6mm x 9.8mm		
Weight ²	<i>WiFi only:</i> from 1.26 lb (0.57kg); <i>WiFi + Digitizer Pen:</i> from 1.30 lb (0.59kg); <i>WiFi + Digitizer Pen + WWAN:</i> from 1.35 lb (0.61kg)		
Case color	Black		
Case material	Magnesium frame, PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) cover		
Battery - type	Lithium Polymer, 30Whr		
Battery - life ¹⁰	up to 25 days (standby); up to 150 hr (MP3 playback); up to 10 hr (web browsing with flash); up to 10 hr (local video playback)		
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available		

| 10-watt AC adapter (via micro-USB) GREENGUARD® certified RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² | | |
| For compatible accessories, please go to O-Tablet-2 sheet; For Lenovo service²² upgrade options, please go to S-Tablet sheet | | |

See footnotes for more detailed information
US model(s) announced October 23 or December 18, 2012
US model(s) withdrawn effective February 2013

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10-watt AC adapter (via micro-USB)
GREENGUARD® certified
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹²
For compatible accessories, please go to O-Tablet-2 sheet;
For Lenovo service²² upgrade options, please go to S-Tablet sheet

ThinkPad Tablet 2 Accessories

Product Specifications Reference (PSREF)

ThinkPad Tablet Expansion

ThinkPad Tablet 2 Dock 0B47109 ann 10/23/12

Keyboard

ThinkPad Tablet 2 Bluetooth Keyboard with Stand 0B47270 ann 10/23/12

Multimedia

ThinkPad In-Ear Headphones with microphone 57Y4488 ann 01/07/10

Tablet

ThinkPad Tablet 2 Digitizer Pen 0A33899 ann 10/23/12

⁷³ The ThinkPad Tablet 2 models without Tablet Pen can not support pen input function via *ThinkPad Tablet 2 Digitizer Pen (0A33899)*

Security

3M ThinkPad Tablet 2 Privacy Filter (landscape) 0C33167 ann 10/23/12

3M ThinkPad Tablet 2 Privacy Filter (portrait) 0C33168 ann 10/23/12

3M ThinkPad Tablet 2 Privacy Filter (4-way) 0C33170 ann 10/23/12

3M ThinkPad Tablet 2 Anti-glare Matte Removable Film 0C33169 ann 10/23/12

Power Adapters

ThinkPad Tablet 2 AC Charger 0B47010 ann 10/23/12

ThinkPad Tablet DC Charger 0A36247 ann 08/16/11

ThinkPad 65W AC Adapter⁶⁶ 40Y7696 ann 01/05/06

⁶⁶ Attachment via the *ThinkPad Tablet 2 Dock 0B47109*

More info at www.lenovo.com/support/poweradapters

Carrying Cases

ThinkPad Tablet 2 Fitted Sleeve⁷¹ 0A33902 ann 10/23/12

⁷¹ *ThinkPad Tablet 2 Fitted Sleeve* perfectly fits the *ThinkPad Tablet 2* and *ThinkPad Tablet 2 Bluetooth Keyboard with Stand 0B47270*

ThinkPad 11W Sling Case 57Y4287 ann 08/16/11

ThinkPad Tablet 2 Slim Case - Black 0A33907 ann 10/23/12

ThinkPad Tablet 2 Slim Case - Red 0A33905 ann 10/23/12

More information at www.lenovo.com/support/cases

Lenovo luxury cases at www.lenovoluxurycases.com

Monitor Accessories⁴⁶

ThinkPad Tablet 2 VGA Adapter 0B47084 ann 10/23/12

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad Helix (Stand mode)



Lenovo ThinkPad Helix (Tablet mode) with
ThinkPad Helix Digitizer Pen
0A33910



Lenovo ThinkPad Helix (Notebook mode)



Lenovo ThinkPad Helix



Lenovo ThinkPad Helix (Notebook mode)



Lenovo ThinkPad Helix



Lenovo® ThinkPad Helix
(Tablet mode)



Lenovo ThinkPad Helix
(Tablet only)



Lenovo ThinkPad Helix (Notebook mode)



Lenovo ThinkPad Helix (Tablet+ mode)



Lenovo ThinkPad Helix



Lenovo ThinkPad Helix (Notebook mode)

ThinkPad Helix (3698) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Digitizer Pen	Front/ Rear (MP)	Keyboard Dock	WLAN 802.11	PCle Mini Card WWAN	Carrier	NFC	Blue-tooth	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
3698-4UU	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S ²⁸	Gobi 4000	AT&T	NFC	BT	iAMT	vPro	Win8 Pro64	03/13
3698-4TU	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	None	BT	iAMT	vPro	Win8 Pro64	03/13
3698-4PU	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	BT	iAMT	vPro	Win8 Pro64	03/13
3698-4NU	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	BT	iAMT	vPro	Win8 Pro64	03/13
3698-4SU	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	NFC	BT	iAMT	vPro	Win8 Pro64	03/13
3698-4RU	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	NFC	BT	iAMT	vPro	Win8 Pro64	03/13
3698-4MU	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	NFC	BT	iAMT	vPro	Win8 Pro64	03/13
3698-4LU	i5-3337U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	NFC	BT	None	No	Win8 Pro64	03/13
3698-4KU	i5-3337U	4GB	11.6" FHD	256G	No	2.0/5.0	Dock	Intel 6205S	None	None	NFC	BT	None	No	Win8 Pro64	03/13
3698-4JU	i5-3337U	4GB	11.6" FHD	180G	No	2.0/5.0	Dock	Intel 6205S	None	None	NFC	BT	None	No	Win8 Pro64	03/13
3698-6EU	i5-3337U	4GB	11.6" FHD	128G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	NFC	BT	None	No	Win8 Pro64	04/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning	Convertible design for four modes - Notebook, Stand, Tablet, and Tablet +			Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit Preloaded applications ¹⁴ (only some listed) - Traditional Desktop apps • Lenovo® Solution Center • ThinkVantage System Update • Password Manager • Lenovo Cloud Storage by SugarSync • PC Device Stage • Nitro PDF Reader • Microsoft® Office preloaded; purchase a product key to activate • Intel Small Business Advantage - Windows Store apps • Lenovo Settings • Lenovo Experience • Lenovo Support • Lenovo Companion • AT&T® All Access • Norton™ Internet Security 2013 (30 days of virus definitions) • AccuWeather • Evernote® Skitch (MultiTouch models) • Skype™ • Amazon Kindle
Processor	Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets			
Storage	mSATA Solid State Drive (SSD), via PCIe Mini Card slot			
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>			
Display	11.6" (295mm) FHD (1920x1080) TFT color, VibrantView (glossy) display with infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 800:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports ten-finger gesture, One Glass Solution <i>Some: Wacom® digitizer pen, supports hover, tip, and pressure modes / a button for selection / no batteries required, pen holder on Tablet</i> <i>* The models without Digitizer Pen can not support pen input function via optional ThinkPad Helix Digitizer Pen (0A33910)</i>			
Digitizer Pen				
Camera	<i>Front camera:</i> 2.0-megapixel, 1080p resolution, fixed focus <i>Rear camera:</i> 5.0-megapixel, 1080p resolution, auto focus, flash LED			
Video capture	1080p video capture			
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array digital microphone, combo audio/microphone jack			
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid			
Control buttons	Windows button, Power button, volume control button, rotation lock switch, reset switch			
Keyboard Dock	Keyboard Dock, 6-row spill-resistant keyboard, TrackPoint® pointing device, MultiTouch glass touchpad w/ 5 integrated buttons, landscape stand, security keyhole, two USB 3.0, one Mini DisplayPort, integrated 4-cell battery (Li-Polymer, 28Wh), the 45-watt AC adapter can charge both the Tablet battery and Keyboard Dock battery			
Light sensor	Ambient Light Sensor, Capella CM3218			
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, STMicroelectronics LSM303DLHC			
Gyroscope	3D gyroscope, STMicroelectronics L3GD20			
Chipset	Mobile Intel QS77 Express Chipset			
Tablet ports	One USB 2.0, one Mini DisplayPort, SIM card slot, Keyboard Dock connector			
Monitor Cable	None			
WLAN ⁴	11a/b/g/n ²⁸ , PCIe SFF (Small Form Factor) Mini Card, Intel Centrino® Advanced-N 6205S, 2x2			
WWAN	<i>Some: Wireless WAN, Qualcomm® Gobi™ 4000 chipset, LTE (4G), PCIe TFF (Thin Form Factor) Mini Card, WCDMA/HSPA/HSPA+, GPS</i>			
Carrier	<i>Some: AT&T® LTE (4G), contract required with service provider</i>			
Bluetooth™	Bluetooth 4.0 wireless			
Ethernet	None			
NFC	<i>Some: Near Field Communication, easy for two devices to communicate with each other</i>			
Intel AMT	<i>Some: Intel Active Management Technology (iAMT)</i>			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Dimensions ³	<i>Tablet only:</i> 11.66" x 7.37" x 0.46"; 296.1mm x 187.3mm x 11.6mm <i>Tablet with Keyboard Dock:</i> 11.66" x 8.90" x 0.80"; 296.1mm x 226mm x 20.4mm			
Weight ²	<i>Tablet only:</i> from 1.73 lb (0.785kg); <i>Tablet with Keyboard Dock:</i> from 3.54 lb (1.606kg)			
Case color	Black			
Case material	Magnesium + PC/ABS (PolyCarbonate/Acrylonitrile-Butadiene-Styrene)			
Battery - type	<i>Tablet battery:</i> Integrated Lithium Polymer 3-cell battery, 42Whr <i>Keyboard Dock battery:</i> Integrated Lithium Polymer 4-cell battery, 28Whr			
Battery - life ¹⁰	<i>MobileMark® 2012:</i> <i>Tablet only:</i> up to 5.6 hr; <i>Tablet with Keyboard Dock:</i> up to 8.0 hr			
Limited Warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			
45-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² For Lenovo service ²² upgrade options, please go to S-TA sheet				

See footnotes for more detailed information
US model(s) announced March 26 or April 2, 2013

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ThinkPad Helix (3698) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Digitizer Pen	Camera Front/ Rear (MP)	Enhanced Keyboard Dock	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
3698-6VU	i5-3337U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S ²⁸	Ericsson	selectable	NFC	None	No	Win8 Pro64	06/13
3698-6UU	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	iAMT	vPro	Win8 Pro64	06/13
3698-6TU	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	iAMT	vPro	Win8 Pro64	06/13
3698-6SU	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	iAMT	vPro	Win8 Pro64	06/13
3698-6RU	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	iAMT	vPro	Win8 Pro64	06/13
3698-6QU	i5-3317U	4GB	11.6" FHD	128G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	None	No	Win8 Pro64	06/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning	Convertible design for four modes - Notebook, Stand, Tablet, and Tablet +										Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit	
Processor	Intel® Core™ i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded applications ¹⁴ (only some listed) - Traditional Desktop apps <ul style="list-style-type: none">• Lenovo® Solution Center• ThinkVantage System Update• Password Manager• Lenovo Cloud Storage by SugarSync• PC Device Stage• Nitro PDF Reader• Microsoft® Office preloaded; purchase a product key to activate• Intel Small Business Advantage - Windows Store apps <ul style="list-style-type: none">• Lenovo Settings• Lenovo Experience• Lenovo Support• Lenovo Companion• AT&T® All Access• Norton™ Internet Security 2013 (30 days of virus definitions)• AccuWeather• Evernote® Skitch (MultiTouch models)• Skype™• Amazon Kindle	
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets											
Storage	mSATA Solid State Drive (SSD), via PCIe Mini Card slot											
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>											
Display	11.6" (295mm) FHD (1920x1080) TFT color, VibrantView (glossy) display with infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 800:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports ten-finger gesture, One Glass Solution											
Digitizer Pen	Wacom® digitizer pen, supports hover, tip, and pressure modes / a button for selection / no batteries required, pen holder on Tablet * The models without Digitizer Pen can not support pen input function via optional ThinkPad Helix Digitizer Pen (0A33910)											
Camera	<i>Front camera:</i> 2.0-megapixel, 1080p resolution, fixed focus <i>Rear camera:</i> 5.0-megapixel, 1080p resolution, auto focus, flash LED											
Video capture	1080p video capture											
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array digital microphone, combo audio/microphone jack											
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid											
Control buttons	Windows button, Power button, volume control button, rotation lock switch, reset switch											
Keyboard Dock	Keyboard Dock, 6-row spill-resistant keyboard, TrackPoint® pointing device, MultiTouch glass touchpad w/ 5 integrated buttons, landscape stand, security keyhole, two USB 3.0, one Mini DisplayPort, integrated 4-cell battery (Li-Polymer, 28Wh), the 45-watt AC adapter can charge both the Tablet battery and Keyboard Dock battery											
Light sensor	Ambient Light Sensor, Capella CM3218											
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, STMicroelectronics LSM303DLHC											
Gyroscope	3D gyroscope, STMicroelectronics L3GD20											
Chipset	Mobile Intel QS77 Express Chipset											
Tablet ports	One USB 2.0, one Mini DisplayPort, SIM card slot, Keyboard Dock connector											
Monitor Cable	None											
WLAN ⁴	11a/b/g/n ²⁸ , PCIe SFF (Small Form Factor) Mini Card, Intel Centrino® Advanced-N 6205S, 2x2											
WWAN	Wireless WAN, Ericsson® C5621gw Mobile Broadband Module, PCIe TFF (Thin Form Factor) Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS											
Carrier	User selectable, contract required with service provider											
Bluetooth™	Bluetooth 4.0 wireless											
Ethernet	None											
NFC	Near Field Communication, easy for two devices to communicate with each other											
Intel AMT	<i>Some:</i> Intel Active Management Technology (iAMT)											
Security chip	Trusted Platform Module, TCG 1.2-compliant											
Dimensions ³	<i>Tablet only:</i> 11.66" x 7.37" x 0.46"; 296.1mm x 187.3mm x 11.6mm <i>Tablet with Keyboard Dock:</i> 11.66" x 8.90" x 0.80"; 296.1mm x 226mm x 20.4mm <i>Tablet only:</i> from 1.73 lb (0.785kg); <i>Tablet with Keyboard Dock:</i> from 3.54 lb (1.606kg)											
Weight ²												
Case color	Black											
Case material	Magnesium + PC/ABS (PolyCarbonate/Acrylonitrile-Butadiene-Styrene)										45-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	
Battery - type	<i>Tablet battery:</i> Integrated Lithium Polymer 3-cell battery, 42Whr <i>Keyboard Dock battery:</i> Integrated Lithium Polymer 4-cell battery, 28Whr											
Battery - life ¹⁰	<i>MobileMark® 2012:</i> <i>Tablet only:</i> up to 5.6 hr; <i>Tablet with Keyboard Dock:</i> up to 8.0 hr											
Limited Warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available										For Lenovo service ²² upgrade options, please go to S-TA sheet	

See footnotes for more detailed information
US model(s) announced June 4, 2013

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(PR1-4) June 2013

ThinkPad Helix (3701)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Digitizer Pen	Camera Front/Rear (MP)	Enhanced Keyboard Dock	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Global (G) Intel vPro	GMP (P)	Preload	Ann Date (mm/yy)
3701-37U	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S ²⁸	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64	03/13
3701-36U	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64	03/13
3701-35U	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64	03/13
3701-34U	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64	03/13
3701-33U	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	NFC	vPro	G	Win8 Pro64	03/13
3701-32U	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	NFC	vPro	G	Win8 Pro64	03/13
3701-2QU	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	None	vPro		Win8 Pro64	03/13
3701-2PU	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	None	None	None	vPro		Win8 Pro64	03/13
3701-4FU	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	vPro		Win8 Pro64	06/13
3701-4EU	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	vPro		Win8 Pro64	06/13
3701-4DU	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	vPro		Win8 Pro64	06/13
3701-4CU	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	vPro		Win8 Pro64	06/13

• A depot repair service 3-year limited warranty

Positioning	Convertible design for four modes - Notebook, Stand, Tablet, and Tablet +											Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit		
Processor	Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology											Preloaded applications¹⁴ (only some listed) - Traditional Desktop apps • Lenovo® Solution Center • ThinkVantage System Update • Password Manager • Lenovo Cloud Storage by SugarSync • PC Device Stage • Nitro PDF Reader • Microsoft® Office preloaded; purchase a product key to activate • Intel Small Business Advantage - Windows Store apps • Lenovo Settings • Lenovo Experience • Lenovo Support • Lenovo Companion • AT&T® All Access • Norton™ Internet Security 2013 (30 days of virus definitions) • AccuWeather • Evernote® Sketch (MultiTouch models) • Skype™ • Amazon Kindle		
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets													
Storage	mSATA Solid State Drive (SSD), via PCIe Mini Card slot													
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>													
Display	11.6" (295mm) FHD (1920x1080) TFT color, VibrantView (glossy) display with infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 800:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports ten-finger gesture, One Glass Solution													
Digitizer Pen	Wacom® digitizer pen, supports hover, tip, and pressure modes / a button for selection / no batteries required, pen holder on Tablet * The models without Digitizer Pen can not support pen input function via optional ThinkPad Helix Digitizer Pen (0A33910)													
Camera	<i>Front camera:</i> 2.0-megapixel, 1080p resolution, fixed focus <i>Rear camera:</i> 5.0-megapixel, 1080p resolution, auto focus, flash LED													
Video capture	1080p video capture													
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array digital microphone, combo audio/microphone jack													
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid													
Control buttons	Windows button, Power button, volume control button, rotation lock switch, reset switch													
Keyboard Dock	Keyboard Dock, 6-row spill-resistant keyboard, TrackPoint® pointing device, MultiTouch glass touchpad w/ 5 integrated buttons, landscape stand, security keyhole, two USB 3.0, one Mini DisplayPort, integrated 4-cell battery (Li-Polymer, 28Wh), the 45-watt AC adapter can charge both the Tablet battery and Keyboard Dock battery													
Light sensor	Ambient Light Sensor, Capella CM3218													
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, STMicroelectronics LSM303DLHC													
Gyroscope	3D gyroscope, STMicroelectronics L3GD20													
Chipset	Mobile Intel QS77 Express Chipset													
Tablet ports	One USB 2.0, one Mini DisplayPort, SIM card slot, Keyboard Dock connector													
Monitor Cable	None													
WLAN ⁴	11a/b/g/n ²⁸ , PCIe SFF (Small Form Factor) Mini Card, Intel Centrino® Advanced-N 6205S, 2x2													
WWAN	<i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 4000 chipset, LTE (4G), PCIe TFF (Thin Form Factor) Mini Card, WCDMA/HSPA/HSPA+, GPS <i>Some:</i> Wireless WAN, Ericsson® C5621gw Mobile Broadband Module, PCIe TFF (Thin Form Factor) Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS													
Carrier	<i>Some:</i> AT&T® LTE (4G), contract required with service provider <i>Some:</i> User selectable, contract required with service provider													
Bluetooth™	Bluetooth 4.0 wireless													
Ethernet	None													
NFC	<i>Some:</i> Near Field Communication, easy for two devices to communicate with each other													
Intel AMT	Intel Active Management Technology (iAMT)													
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Dimensions ³	<i>Tablet only:</i> 11.66" x 7.37" x 0.46"; 296.1mm x 187.3mm x 11.6mm <i>Tablet with Keyboard Dock:</i> 11.66" x 8.90" x 0.80"; 296.1mm x 226mm x 20.4mm													
Weight ²	<i>Tablet only:</i> from 1.73 lb (0.785kg); <i>Tablet with Keyboard Dock:</i> from 3.54 lb (1.606kg)													
Case color	Black													
Case material	Magnesium + PC/ABS (PolyCarbonate/Acrylonitrile-Butadiene-Styrene)													
Battery - type	<i>Tablet battery:</i> Integrated Lithium Polymer 3-cell battery, 42Whr <i>Keyboard Dock battery:</i> Integrated Lithium Polymer 4-cell battery, 28Whr													
Battery - life ¹⁰	<i>MobileMark® 2012:</i> <i>Tablet only:</i> up to 5.6 hr; <i>Tablet with Keyboard Dock:</i> up to 8.0 hr													
Limited Warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
US model(s) announced March 26 or June 4, 2013

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ThinkPad Helix (3702) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Storage	Digitizer Pen	Camera Front/Rear (MP)	Enhanced Keyboard Dock	WLAN 802.11	PCIe Mini Card WWAN	Carrier	NFC	Global (G) Intel vPro GMP (P)	Preload	Ann Date (mm/yy)
3702-5AU	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S ²⁸	None	None	NFC	vPro	G P	Win8 Pro64 03/13
3702-46U	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64 03/13
3702-45U	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64 03/13
3702-44U	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64 03/13
3702-43U	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Gobi 4000	AT&T	NFC	vPro		Win8 Pro64 03/13
3702-5UU	i7-3667U	8GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	None	vPro		Win8 Pro64 06/13
3702-5TU	i7-3667U	8GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	None	vPro		Win8 Pro64 06/13
3702-5LU	i5-3427U	4GB	11.6" FHD	256G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	vPro		Win8 Pro64 06/13
3702-5KU	i5-3427U	4GB	11.6" FHD	180G	Pen	2.0/5.0	Dock	Intel 6205S	Ericsson	selectable	NFC	vPro		Win8 Pro64 06/13

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty

Positioning	Convertible design for four modes - Notebook, Stand, Tablet, and Tablet +			Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit Preloaded applications ¹⁴ (only some listed) - Traditional Desktop apps <ul style="list-style-type: none">• Lenovo® Solution Center• ThinkVantage System Update• Password Manager• Lenovo Cloud Storage by SugarSync• PC Device Stage• Nitro PDF Reader• Microsoft® Office preloaded; purchase a product key to activate• Intel Small Business Advantage - Windows Store apps <ul style="list-style-type: none">• Lenovo Settings• Lenovo Experience• Lenovo Support• Lenovo Companion• AT&T® All Access• Norton™ Internet Security 2013 (30 days of virus definitions)• AccuWeather• Evernote® Skitch (MultiTouch models)• Skype™• Amazon Kindle
Processor	Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000 , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets			
Storage	mSATA Solid State Drive (SSD), via PCIe Mini Card slot			
Graphics	Intel HD Graphics 4000 in processor, external digital monitor support via Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz</i>			
Display	11.6" (295mm) FHD (1920x1080) TFT color, VibrantView (glossy) display with infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 800:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports ten-finger gesture, One Glass Solution			
Digitizer Pen	Wacom® digitizer pen, supports hover, tip, and pressure modes / a button for selection / no batteries required, pen holder on Tablet * The models without Digitizer Pen can not support pen input function via optional ThinkPad Helix Digitizer Pen (0A33910)			
Camera	<i>Front camera:</i> 2.0-megapixel, 1080p resolution, fixed focus <i>Rear camera:</i> 5.0-megapixel, 1080p resolution, auto focus, flash LED			
Video capture	1080p video capture			
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / dual array digital microphone, combo audio/microphone jack			
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid			
Control buttons	Windows button, Power button, volume control button, rotation lock switch, reset switch			
Keyboard Dock	Keyboard Dock, 6-row spill-resistant keyboard, TrackPoint® pointing device, MultiTouch glass touchpad w/ 5 integrated buttons, landscape stand, security keyhole, two USB 3.0, one Mini DisplayPort, integrated 4-cell battery (Li-Polymer, 28Wh), the 45-watt AC adapter can charge both the Tablet battery and Keyboard Dock battery			
Light sensor	Ambient Light Sensor, Capella CM3218			
G-sensor/ eCompass	3D accelerometer and 3D magnetometer module, STMicroelectronics LSM303DLHC			
Gyroscope	3D gyroscope, STMicroelectronics L3GD20			
Chipset	Mobile Intel QS77 Express Chipset			
Tablet ports	One USB 2.0, one Mini DisplayPort, SIM card slot, Keyboard Dock connector			
Monitor Cable	None			
WLAN ⁴	11a/b/g/n ²⁸ , PCIe SFF (Small Form Factor) Mini Card, Intel Centrino® Advanced-N 6205S, 2x2			
WWAN	<i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 4000 chipset, LTE (4G), PCIe TFF (Thin Form Factor) Mini Card, WCDMA/HSPA/HSPA+, GPS <i>Some:</i> Wireless WAN, Ericsson® C5621gw Mobile Broadband Module, PCIe TFF (Thin Form Factor) Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS			
Carrier	<i>Some:</i> AT&T® LTE (4G), contract required with service provider <i>Some:</i> User selectable, contract required with service provider			
Bluetooth™	Bluetooth 4.0 wireless			
Ethernet	None			
NFC	<i>Some:</i> Near Field Communication, easy for two devices to communicate with each other			
Intel AMT	Intel Active Management Technology (iAMT)			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Dimensions ³	<i>Tablet only:</i> 11.66" x 7.37" x 0.46"; 296.1mm x 187.3mm x 11.6mm <i>Tablet with Keyboard Dock:</i> 11.66" x 8.90" x 0.80"; 296.1mm x 226mm x 20.4mm			
Weight ²	<i>Tablet only:</i> from 1.73 lb (0.785kg); <i>Tablet with Keyboard Dock:</i> from 3.54 lb (1.606kg)			
Case color	Black			
Case material	Magnesium + PC/ABS (PolyCarbonate/Acrylonitrile-Butadiene-Styrene)			
Battery - type	<i>Tablet battery:</i> Integrated Lithium Polymer 3-cell battery, 42Whr <i>Keyboard Dock battery:</i> Integrated Lithium Polymer 4-cell battery, 28Whr			
Battery - life ¹⁰	<i>MobileMark® 2012:</i> <i>Tablet only:</i> up to 5.6 hr; <i>Tablet with Keyboard Dock:</i> up to 8.0 hr			
Limited Warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time/ service upgrades ²² available			
	For Lenovo service ²² upgrade options, please go to S-TA sheet			

See footnotes for more detailed information
US model(s) announced March 26 or June 4, 2013

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ThinkPad Helix Accessories

Product Specifications Reference (PSREF)

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Lenovo® Slim USB Portable DVD Burner	0A33988	ann 06/14/11

ThinkPad Expansion

USB 2.0 Port Replicator with Digital Video	0A33942	ann 03/22/11
ThinkPad USB 3.0 Dock	0A33970	ann 05/15/12
Lenovo Essential Notebook Stand	45J9292	ann 05/12/09

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann 01/07/10
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Tablet

ThinkPad Helix Digitizer Pen ⁷³	0A33910	ann 01/29/13
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⁷³ The ThinkPad Helix models without Tablet Pen can not support pen input function via *ThinkPad Helix Digitizer Pen* (0A33910)

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Ethernet

Lenovo USB 2.0 Ethernet Adapter	0A36322	ann 08/14/12
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Security

3M ThinkPad Helix Privacy Filter (4-way)	4Z10A23288	ann 03/26/13
3M ThinkPad Helix Anti-glare Screen Protector	4Z10A23289	ann 03/26/13
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

Power Adapters

ThinkPad 45W AC Adapter	0B47030	ann 01/29/13
90W Ultralim AC/DC Combo Adapter ⁷⁰	41R4493	ann 09/22/09

⁷⁰ Requires the *Lenovo Slim Power Tip* 0B47048

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

•Lenovo Slim Power Tip	0B47048	ann 08/14/12
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More information at www.lenovopowertips.com

Carrying Cases

Up to 12.5" widescreen models:		
ThinkPad 12.5" Ultrabook Topload	0B47416	ann 12/04/12

Up to 14" widescreen models:		
ThinkPad Ultralight Backpack	0B47306	ann 12/11/12
ThinkPad Ultralight Topload	0B47307	ann 12/11/12

Up to 15.6" widescreen models:		
Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08
Lenovo Sport Backpack - Red	0A33896	ann 02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann 02/28/12
Lenovo Sport Messenger - Red	0A33898	ann 02/28/12
Lenovo Sport Backpack - Blue	0B47298	ann 08/28/12
Lenovo Sport Slimcase - Blue	0B47300	ann 08/28/12
Lenovo Sport Messenger - Blue	0B47299	ann 08/28/12
Lenovo Sport Backpack - Grey	0B47301	ann 08/28/12
Lenovo Sport Slimcase - Grey	0B47303	ann 08/28/12
Lenovo Sport Messenger - Grey	0B47302	ann 08/28/12

More information at www.lenovo.com/support/cases

Monitor Accessories⁴⁶

Lenovo Mini-DisplayPort to VGA Monitor Cable	0A36536	ann 05/17/11
Mini-DisplayPort to Single-link DVI Monitor Cable	0B47090	ann 06/26/12
Mini-DisplayPort to DisplayPort Monitor Cable	0B47091	ann 07/24/12
Lenovo USB Soundbar	0A36190	ann 05/01/12
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad Yoga



Lenovo ThinkPad Yoga



Lenovo ThinkPad Yoga



Lenovo ThinkPad Yoga



Lenovo ThinkPad Yoga



Lenovo ThinkPad Yoga

ThinkPad Yoga (20CD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Screen type	Pen	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	M.2 Card WWAN /SSD	SIM card	Top color	Battery cells	Preload	Ann date (mm/yy)
20CD0002US	i7-4500U	8GB	12.5" HD	anti-smudge	None	720p	256G SSD	Intel 7260 + BT	None	None	Black	8	Win8.1 64	11/13
20CD000GUS	i3-4010U	4GB	12.5" HD	anti-smudge	None	720p	500G 5400	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	11/13
20CD000HUS	i5-4200U	4GB	12.5" HD	anti-smudge	None	720p	500G 5400	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	11/13
20CD000JUS	i5-4200U	4GB	12.5" FHD	anti-smudge	None	720p	500G 5400	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	11/13
20CD000KUS	i7-4500U	8GB	12.5" HD	anti-smudge	None	720p	500G 5400	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	11/13
20CD000LUS	i7-4500U	8GB	12.5" FHD	anti-smudge	None	720p	500G 5400	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	11/13
20CD000MUS	i5-4200U	8GB	12.5" FHD	anti-glare	Pen	720p	500G 5400	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	11/13
20CD000NUS	i5-4200U	4GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	Intel 7260 ac + BT	None	None	Black	8	Win8.1 Pro64	11/13
20CD002FUS	i5-4200U	4GB	12.5" HD	anti-smudge	None	720p	256G SSD	Intel 7260 ac + BT	None	None	Black	8	Win8.1 Pro64	11/13
20CD002GUS	i5-4200U	4GB	12.5" FHD	anti-smudge	None	720p	256G SSD	Intel 7260 ac + BT	None	None	Black	8	Win8.1 Pro64	11/13
20CD00AYUS	i7-4500U	8GB	12.5" FHD	anti-glare	Pen	720p	500G 7200	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	01/14
20CD00C5US	i7-4500U	8GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	Intel 7260 ac + BT	None	None	Black	8	Win7 Pro64	01/14
20CD00CHUS	i5-4200U	4GB	12.5" HD	anti-smudge	None	720p	500G 7200	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	02/14
20CD00CGUS	i3-4010U	4GB	12.5" HD	anti-smudge	None	720p	500G 7200	Intel 7260 ac + BT	16GB	None	Black	8	Win8.1 Pro64	02/14

Positioning	<i>Convertible tablet ultrabook™; one spindle</i>											Preloaded operating system²⁰		
Processor	Intel® Core™ i3-4010U processor (2 cores, 1.70GHz, 3MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-4200U processor (2 cores, 1.60GHz, 3MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology Intel Core i7-4500U processor (2 cores, 1.80GHz, 4MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology											<ul style="list-style-type: none"> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit - Some: Windows 8.1 64-bit - Some: Windows 8.1 Pro 64-bit 		
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no SO-DIMM sockets											Preloaded applications¹⁴ (only some listed, for Windows 8.1 models)		
Optical	None											<ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate • Skype™ 		
SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: M.2 Solid State Drive (SSD), via M.2 Card slot													
M.2 SSD														
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color , smudgeless, 10-point touch screen LED backlight, 300 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , smudgeless, 10-point touch screen LED backlight, 400 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , anti-glare, 10-point touch screen with Pen, LED backlight, 400 nits, 16:9 aspect ratio, IPS HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Camera														
Graphics	Intel HD Graphics 4400 in processor, supports external digital monitor via Mini HDMI; supports dual independent display; <i>Maximum external resolution: 1920x1200 (Mini HDMI)@60Hz</i>													
Keyboard	6-row, 83-key, spill-resistant, multimedia Fn keys, LED backlight													
TrackPoint®	TrackPoint pointing device													
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch													
Light sensor	Ambient light sensor													
ThinkLight™	None													
Dimensions ³	8-cell: 12.44" x 8.70" x 0.74"; 316mm x 221mm x 18.8mm 8-cell with Pen: 12.44" x 8.70" x 0.76"; 316mm x 221mm x 19.4mm													
Weight ²	8-cell: from 3.46 lb (1.57kg) 8-cell with Pen: from 3.59 lb (1.63kg)													
Case material	Display cover: Magnesium and Aluminum + Polyphenylene sulfide (PPS); Bottom: Magnesium and Aluminum + Polyphenylene sulfide (PPS);													
Battery - type	Integrated Li-Polymer 8-cell, HW Authentication													
Battery - life ¹⁰	8-cell (47Whr): up to 7.0 hr													
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)													
ExpressCard	None													
Ports	Two USB 3.0(one powered), external monitor (mini-HDMI)													
PCIe Mini Card	One PCI Express Mini Card slot													
PCIe WLAN ⁴	Some: 11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth combo adapter, 2x2													
M.2 Card	One M.2 Card slot for support of WWAN card or SSD													
WWAN	None													
Bluetooth™	Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card													
Ethernet	None													
Intel AMT	None													
Audio support	High Definition (HD) Audio, Conexant CX20751 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Fingerprint reader	None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information

US model(s) announced November 5, 2013; January 28, or February 4, 2014

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ThinkPad Yoga (20CD) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Screen type	Pen	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	M.2 Card WWAN /SSD	Top color	Battery cells	Preload	Ann date (mm/yy)
20CD002HUS	i7-4500U	8GB	12.5" HD	anti-smudge	None	720p	256G SSD	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD002JUS	i7-4500U	8GB	12.5" FHD	anti-smudge	None	720p	256G SSD	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD002PUS	i5-4200U	4GB	12.5" HD	anti-smudge	None	720p	128G SSD	Intel 7260 + BT	None	Black	8	Win8.1 64	11/13
20CD002QUS	i5-4200U	4GB	12.5" FHD	anti-glare	Pen	720p	128G SSD	Intel 7260 + BT	None	Black	8	Win8.1 64	11/13
20CD002RUS	i7-4500U	8GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	Intel 7260 + BT	None	Black	8	Win8.1 64	11/13
20CD002SUS	i5-4200U	4GB	12.5" HD	anti-smudge	None	720p	180G SSD OPAL	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD002TUS	i5-4200U	4GB	12.5" FHD	anti-glare	Pen	720p	180G SSD OPAL	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD002UUS	i7-4500U	8GB	12.5" HD	anti-smudge	None	720p	180G SSD OPAL	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD002VUS	i7-4500U	8GB	12.5" FHD	anti-glare	Pen	720p	180G SSD OPAL	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD002WUS	i7-4500U	8GB	12.5" FHD	anti-smudge	None	720p	180G SSD OPAL	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD002XUS	i5-4200U	4GB	12.5" FHD	anti-smudge	None	720p	180G SSD OPAL	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	11/13
20CD00AYUS	i7-4500U	8GB	12.5" FHD	anti-glare	Pen	720p	500G 7200	Intel 7260 ac + BT	16GB	Black	8	Win8.1 Pro64	12/13
20CD00B0US	i7-4500U	8GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	Intel 7260 ac + BT	None	Black	8	Win8.1 Pro64	12/13

Positioning Processor	<i>Convertible tablet ultrabook™; one spindle</i> Intel® Core™ i5-4200U processor (2 cores, 1.60GHz, 3MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology Intel Core i5-4300U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-4500U processor (2 cores, 1.80GHz, 4MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-4600U processor (2 cores, 2.10GHz, 4MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology										Preloaded operating system²⁰ - Some: Windows 8.1 64-bit - Some: Windows 8.1 Pro 64-bit Preloaded applications¹⁴ (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate • Skype™			
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no SO-DIMM sockets													
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: M.2 Solid State Drive (SSD), via M.2 Card slot													
M.2 SSD														
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color , smudgeless, 10-point touch screen LED backlight, 300 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , smudgeless, 10-point touch screen LED backlight, 400 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , anti-glare, 10-point touch screen with Pen, LED backlight, 400 nits, 16:9 aspect ratio, IPS HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	Intel HD Graphics 4400 in processor, supports external digital monitor via Mini HDMI; supports dual independent display; <i>Maximum external resolution: 1920x1200 (Mini HDMI) @60Hz</i>													
Keyboard TrackPoint®	6-row, 83-key, spill-resistant, multimedia Fn keys, LED backlight													
Touchpad	TrackPoint pointing device													
Light sensor	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch													
ThinkLight™	Ambient light sensor													
Dimensions ³	8-cell: 12.44" x 8.70" x 0.74"; 316mm x 221mm x 18.8mm 8-cell with Pen: 12.44" x 8.70" x 0.76"; 316mm x 221mm x 19.4mm 8-cell: from 3.46 lb (1.57kg) 8-cell with Pen: from 3.59 lb (1.63kg)													
Weight ²														
Case material	Display cover: Magnesium and Aluminum + Polyphenylene sulfide (PPS); Bottom: Magnesium and Aluminum + Polyphenylene sulfide (PPS);													
Battery - type	Integrated Li-Polymer 8-cell, HW Authentication													
Battery - life ¹⁰	8-cell (47Whr): up to 7.0 hr													
Multicard Reader ExpressCard	4-in-1 reader (SD, SDHC, SDXC, MMC)													
Ports	None													
PCIe Mini Card	Two USB 3.0(one powered), external monitor (mini-HDMI)													
PCIe WLAN ⁴	One PCI Express Mini Card slot Some: 11b/g/n, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth combo adapter, 2x2													
M.2 Card WWAN	One M.2 Card slot for support of WWAN card or SSD													
Bluetooth™	None													
Ethernet	Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card													
Intel AMT	None													
Audio support	None													
Security	High Definition (HD) Audio, Conexant CX20751 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack													
Security chip	Power-on password, hard disk password, supervisor password, security keyhole													
Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant													
Limited warranty ¹²	None													
	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
 US model(s) announced November 5 or December 17, 2013

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ThinkPad Yoga (20CD) - TopSeller - III

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Screen type	Pen	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	M.2 Card WWAN /SSD	SIM card	Top color	Bat-tery cells	Intel vPro	Preload	Ann date (mm/yy)
20CD00BXUS	i5-4300U	4GB	12.5" FHD	anti-glare	Pen	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20CD00BYUS	i7-4600U	8GB	12.5" HD	anti-smudge	None	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20CD00C0US	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win7 Pro64	01/14
20CD00C3US	i5-4300U	4GB	12.5" FHD	anti-glare	Pen	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win7 Pro64	01/14
20CD00C1US	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win7 Pro64	01/14
20CD00C2US	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win7 Pro64	01/14
20CD00C4US	i7-4600U	8GB	12.5" FHD	anti-smudge	None	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win7 Pro64	01/14
20CD00B2US	i7-4600U	8GB	12.5" FHD	anti-smudge	None	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20CD00B1US	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20CD00AXUS	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20CD00AVUS	i5-4300U	4GB	12.5" FHD	anti-glare	Pen	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20CD00AWUS	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14

Positioning Processor	Convertible tablet ultrabook™; one spindle Intel® Core™ i5-4300U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-4600U processor (2 cores, 2.10GHz, 4MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology											Preloaded operating system ²⁰ - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit - Some: Windows 8.1 Pro 64-bit			
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no SO-DIMM sockets											Preloaded applications ¹⁴ (only some listed, for Windows 8.1 models) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate • Skype™			
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: M.2 Solid State Drive (SSD), via M.2 Card slot														
M.2 SSD															
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color , smudgeless, 10-point touch screen LED backlight, 300 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , smudgeless, 10-point touch screen LED backlight, 400 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , anti-glare, 10-point touch screen with Pen, LED backlight, 400 nits, 16:9 aspect ratio, IPS HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus														
Camera															
Graphics	Intel HD Graphics 4400 in processor, supports external digital monitor via Mini HDMI; supports dual independent display; Maximum external resolution: 1920x1200 (Mini HDMI)@60Hz														
Keyboard TrackPoint®	6-row, 83-key, spill-resistant, multimedia Fn keys, LED backlight														
Touchpad	TrackPoint pointing device														
Light sensor	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch														
ThinkLight™	Ambient light sensor														
Dimensions ³	8-cell: 12.44" x 8.70" x 0.74"; 316mm x 221mm x 18.8mm 8-cell with Pen: 12.44" x 8.70" x 0.76"; 316mm x 221mm x 19.4mm														
Weight ²	8-cell: from 3.46 lb (1.57kg) 8-cell with Pen: from 3.59 lb (1.63kg)														
Case material	Display cover: Magnesium and Aluminum + Polyphenylene sulfide (PPS); Bottom: Magnesium and Aluminum + Polyphenylene sulfide (PPS);														
Battery - type	Integrated Li-Polymer 8-cell, HW Authentication														
Battery - life ¹⁰	8-cell (47Whr): up to 7.0 hr														
Multicard Reader ExpressCard	4-in-1 reader (SD, SDHC, SDXC, MMC)														
Ports	None Two USB 3.0(one powered), external monitor (mini-HDMI)														
PCIe Mini Card	One PCI Express Mini Card slot														
PCIe WLAN ⁴	11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth combo adapter, 2x2														
M.2 Card	One M.2 Card slot for support of WWAN card or SSD														
WWAN	None														
Bluetooth™	Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card														
Ethernet	None														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	High Definition (HD) Audio, Conexant CX20751 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	None														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
US model(s) announced January 28, 2014

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(STLA1-3) January 2014

ThinkPad Yoga (20C0)

Product Specifications Reference (PSREF)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Screen type	Pen	Camera	Disk SATA GB³	rpm	PCIe Mini Card WLAN	M.2 Card WWAN /SSD	SIM card	Top color	Bat-tery cells	Intel vPro	Preload	Ann date (mm/yy)
20C0004PUS	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	500G	7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0003WUS	i5-4300U	8GB	12.5" FHD	anti-glare	Pen	720p	500G	7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004VUS	i5-4300U	8GB	12.5" HD	anti-smudge	None	720p	500G	7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00041US	i7-4600U	8GB	12.5" HD	anti-smudge	None	720p	500G	7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004WUS	i5-4300U	4GB	12.5" FHD	anti-glare	Pen	720p	500G	7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00049US	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	500G	7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0003XUS	i5-4300U	4GB	12.5" FHD	anti-glare	Pen	720p	180G	OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004BUS	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	256G	SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00045US	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	256G	SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004EUS	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	180G	OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00042US	i5-4300U	8GB	12.5" HD	anti-smudge	None	720p	256G	SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004JUS	i7-4600U	8GB	12.5" FHD	anti-smudge	None	720p	256G	SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004LUS	i7-4600U	8GB	12.5" FHD	anti-smudge	None	720p	180G	OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00046US	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	180G	OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004RUS	i5-4300U	8GB	12.5" FHD	anti-glare	Pen	720p	256G	SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004UUS	i7-4600U	8GB	12.5" HD	anti-smudge	None	720p	180G	OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004NUS	i7-4600U	8GB	12.5" HD	anti-smudge	None	720p	256G	SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00063US	i5-4300U	8GB	12.5" FHD	anti-glare	Pen	720p	128G	SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	03/14

Positioning Processor	Convertible tablet ultrabook™; one spindle Intel® Core™ i5-4300U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-4600U processor (2 cores, 2.10GHz, 4MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ - Some: Windows 8.1 Pro 64-bit Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage• Password Manager• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Microsoft Office preloaded; purchase a product key to activate• Skype™
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no SO-DIMM sockets	
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™	
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot	
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color , smudgeless, 10-point touch screen LED backlight, 300 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , smudgeless, 10-point touch screen LED backlight, 400 nits, 16:9 aspect ratio, IPS; Some: 12.5" (317.5mm) FHD (1920x1080) TFT color , anti-glare, 10-point touch screen with Pen, LED backlight, 400 nits, 16:9 aspect ratio, IPS HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	Intel HD Graphics 4400 in processor, supports external digital monitor via Mini HDMI; supports dual independent display; <i>Maximum external resolution: 1920x1200 (Mini HDMI) @60Hz</i>	
Keyboard	6-row, 83-key, spill-resistant, multimedia Fn keys, LED backlight	
TrackPoint®	TrackPoint pointing device	
Touchpad	UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch	
Light sensor	Ambient light sensor	
ThinkLight™	None	
Dimensions ³	<i>8-cell:</i> 12.44" x 8.70" x 0.74"; 316mm x 221mm x 18.8mm <i>8-cell with Pen:</i> 12.44" x 8.70" x 0.76"; 316mm x 221mm x 19.4mm	
Weight ²	<i>8-cell:</i> from 3.46 lb (1.57kg) <i>8-cell with Pen:</i> from 3.59 lb (1.63kg)	
Case material	<i>Display cover:</i> Magnesium and Aluminum + Polyphenylene sulfide (PPS); <i>Bottom:</i> Magnesium and Aluminum + Polyphenylene sulfide (PPS);	
Battery - type	Integrated Li-Polymer 8-cell, HW Authentication	
Battery - life ¹⁰	<i>8-cell (47Whr):</i> up to 7.0 hr	
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)	
ExpressCard	None	
Ports	Two USB 3.0(one powered), external monitor (mini-HDMI)	
PCIe Mini Card	One PCI Express Mini Card slot	
PCIe WLAN ⁴	11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth combo adapter, 2x2	
M.2 Card	One M.2 Card slot for support of WWAN card or SSD	
WWAN	None	
Bluetooth™	Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card	
Ethernet	None	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant CX20751 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	3-year - depot repair service / service upgrades ²² available	

Supports ThinkVantage® technologies
45-watt AC Adapter ENERGY STAR® compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For Lenovo ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
US model(s) announced January 28, or March 11, 2014

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(STLA1-4) March 2014

ThinkPad Yoga (20C0) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Screen type	Pen	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	M.2 Card WWAN /SSD	SIM card	Top color	Bat-tery cells	Intel vPro	Preload	Ann date (mm/yy)
20C0003YUS	i5-4300U	8GB	12.5" HD	anti-smudge	None	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004DUS	i5-4300U	4GB	12.5" FHD	anti-glare	Pen	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004AUS	i5-4300U	8GB	12.5" FHD	anti-glare	Pen	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00040US	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004FUS	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004CUS	i7-4600U	8GB	12.5" HD	anti-smudge	None	720p	500G 7200	7260 ac + BT	16GB	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004MUS	i7-4600U	8GB	12.5" HD	anti-smudge	None	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004HUS	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00044US	i7-4600U	8GB	12.5" FHD	anti-smudge	None	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004QUS	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004TUS	i7-4600U	8GB	12.5" FHD	anti-smudge	None	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00043US	i5-4300U	8GB	12.5" HD	anti-smudge	None	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004GUS	i5-4300U	4GB	12.5" HD	anti-smudge	None	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00047US	i7-4600U	8GB	12.5" FHD	anti-glare	Pen	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004KUS	i5-4300U	4GB	12.5" FHD	anti-glare	Pen	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C0004SUS	i5-4300U	8GB	12.5" FHD	anti-glare	Pen	720p	256G SSD	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14
20C00048US	i7-4600U	8GB	12.5" HD	anti-smudge	None	720p	180G OPAL	7260 ac + BT	None	None	Black	8	vPro	Win8.1 Pro64	01/14

Positioning Processor	Convertible tablet ultrabook™; one spindle Intel® Core™ i5-4300U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-4600U processor (2 cores, 2.10GHz, 4MB Cache), Intel HD Graphics 4400, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology			Preloaded operating system ²⁰ - Some: Windows 8.1 Pro 64-bit Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage• Password Manager• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Microsoft Office preloaded; purchase a product key to activate• Skype™
Memory	4GB or 8GB / PC3-12800 1600MHz DDR3L / soldered to systemboard, no SO-DIMM sockets			
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot			
M.2 SSD				
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) TFT color , smudgeless, 10-point touch screen LED backlight, 300 nits, 16:9 aspect ratio, IPS; <i>Some:</i> 12.5" (317.5mm) FHD (1920x1080) TFT color , smudgeless, 10-point touch screen LED backlight, 400 nits, 16:9 aspect ratio, IPS; <i>Some:</i> 12.5" (317.5mm) FHD (1920x1080) TFT color , anti-glare, 10-point touch screen with Pen, LED backlight, 400 nits, 16:9 aspect ratio, IPS HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus			
Graphics	Intel HD Graphics 4400 in processor, supports external digital monitor via Mini HDMI; supports dual independent display; <i>Maximum external resolution: 1920x1200 (Mini HDMI)@60Hz</i>			
Keyboard TrackPoint® Touchpad Light sensor ThinkLight™	6-row, 83-key, spill-resistant, multimedia Fn keys, LED backlight TrackPoint pointing device UltraNav™, wide touchpad below keyboard, integrated five buttons, multi-touch Ambient light sensor None			
Dimensions ³	<i>8-cell:</i> 12.44" x 8.70" x 0.74"; 316mm x 221mm x 18.8mm <i>8-cell with Pen:</i> 12.44" x 8.70" x 0.76"; 316mm x 221mm x 19.4mm <i>8-cell:</i> from 3.46 lb (1.57kg) <i>8-cell with Pen:</i> from 3.59 lb (1.63kg)			
Weight ²				
Case material	<i>Display cover:</i> Magnesium and Aluminum + Polyphenylene sulfide (PPS); <i>Bottom:</i> Magnesium and Aluminum + Polyphenylene sulfide (PPS);			
Battery - type Battery - life ¹⁰	Integrated Li-Polymer 8-cell, HW Authentication <i>8-cell (47Whr):</i> up to 7.0 hr			
Multicard Reader ExpressCard Ports	4-in-1 reader (SD, SDHC, SDXC, MMC) None Two USB 3.0(one powered), external monitor (mini-HDMI)			
PCIe Mini Card PCIe WLAN ⁴	One PCI Express Mini Card slot 11ac, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + Bluetooth combo adapter, 2x2			
M.2 Card WWAN Bluetooth™ Ethernet Intel AMT Audio support	One M.2 Card slot for support of WWAN card or SSD None Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card None Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant CX20751 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole			
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant None			
Limited warranty ¹²	3-year/1-year battery, limited onsite service / service upgrades ²² available			

Supports ThinkVantage® technologies
45-watt AC Adapter ENERGY STAR® compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²
For Lenovo ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
US model(s) announced January 28, 2014

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ThinkPad Twist S230u

ThinkPad®



Lenovo® ThinkPad Twist S230u
(Tent Mode)



Lenovo ThinkPad Twist S230u
(Tablet Mode)



Lenovo ThinkPad Twist S230u
(Notebook Mode)



Lenovo ThinkPad Twist S230u
(Stand Mode)



Lenovo ThinkPad Twist S230u



Lenovo ThinkPad Twist S230u

ThinkPad Twist S230u (20C4) - Ultrabook

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	SIM card	Top color	Blue-tooth	Battery cells	Preload	Ann date (mm/yy)
20C4-29U	i7-3667U	8GB	12.5" HD <i>Multi</i>	720p	128G SSD	Intel 2230 ²⁸	None	None	Black	BT	8	Win8 Pro64	06/13
20C4-28U	i7-3667U	8GB	12.5" HD <i>Multi</i>	720p	128G SSD	TP 11a/b/g/n	None	None	Black	BT	8	Win8 Pro64	06/13
20C4-27U	i7-3667U	8GB	12.5" HD <i>Multi</i>	720p	500G 7200	Intel 2230	24GB	None	Black	BT	8	Win8 Pro64	06/13
20C4-26U	i7-3667U	8GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	06/13
20C4-25U	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	128G SSD	Intel 2230	None	None	Black	BT	8	Win8 Pro64	06/13
20C4-24U	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	128G SSD	TP 11a/b/g/n	None	None	Black	BT	8	Win8 Pro64	06/13
20C4-23U	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	Intel 2230	24GB	None	Black	BT	8	Win8 Pro64	06/13
20C4-22U	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	06/13

Positioning	<i>Convertible tablet ultrabook™; one spindle</i>										Preloaded operating system²⁰ - Windows 8 Pro 64-bit		
Processor	Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none"> • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate • Skype™ 		
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3 / soldered to systemboard, no SO-DIMM sockets												
Optical	None												
SATA disk	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable												
mSATA™ SSD	<i>Some:</i> 24GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot												
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color , smudgeless and anti-reflective display with Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, rotate and swivel hinge <i>Bottom buttons:</i> volume up / down and Windows buttons <i>Side buttons:</i> power and auto rotation buttons												
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 5-point multi-touch												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	Intel HD Graphics 4000 in processor, supports external digital monitor via Mini HDMI and Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (Mini DisplayPort) @60Hz; 1920x1200 (Mini HDMI) @60Hz												
Keyboard	6-row, 83-key, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint pointing device												
Touchpad	UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch												
Light sensor	Ambient light sensor												
ThinkLight™	None												
Dimensions ³	<i>8-cell:</i> 12.32" x 9.29" x 0.79"; 313mm x 236mm x 20mm												
Weight ²	<i>8-cell:</i> from 3.50 lb (1.60kg)												
Case material	<i>Display cover:</i> Magnesium + Polyphenylene sulfide (PPS); <i>Bottom:</i> Magnesium + PPS												
Battery - type	Integrated Li-Polymer 8-cell, HW Authentication												
Extended Battery	None												
Battery - life ¹⁰	<i>8-cell (42.4Whr):</i> up to 6.0 hr												
Chipset	Mobile Intel HM77 Express Chipset												
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)												
ExpressCard	None												
Smart Card Read	None												
Ports	Two USB 3.0, external monitor (mini-HDMI, mini-DisplayPort), ethernet (RJ-45)												
PCIe Mini Card	Two PCI Express Mini Card slots												
PCIe WLAN ⁴	<i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2												
PCIe WWAN	None												
SIM card	None												
Modem	None												
Bluetooth™	Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card												
Ethernet	Gigabit Network Connection Realtek® RTL8111F, PHY, PCIe x1												
Intel AMT	None												
Audio support	High Definition (HD) Audio, Realtek ALC3202 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	None												
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												

See footnotes for more detailed information
US model(s) announced June 4, 2013

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(TANR1-4) July 2013

ThinkPad Twist S230u (3347) - TopSeller (Ultrabook)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	SIM card	Top color	Blue-tooth	Bat-tery cells	Preload	Ann date (mm/yy)
3347-2YU	i3-3217U	4GB	12.5" HD <i>Multi</i>	720p	320G 7200	TP 11a/b/g/n ²⁸	24GB	None	Black	BT	8	Win8 Pro64	10/12
3347-2RU	i7-3517U	8GB	12.5" HD <i>Multi</i>	720p	128G SSD	TP 11a/b/g/n	None	None	Black	BT	8	Win8 Pro64	10/12
3347-2QU	i5-3317U	4GB	12.5" HD <i>Multi</i>	720p	128G SSD	TP 11a/b/g/n	None	None	Black	BT	8	Win8 Pro64	10/12
3347-2NU	i3-3217U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	10/12
3347-2HU	i5-3317U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	10/12
3347-2GU	i7-3517U	8GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	10/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 1-year limited warranty**

Positioning Processor	Convertible tablet ultrabook™; one spindle Intel® Core™ i3-3217U processor (2 cores, 1.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3317U processor (2 cores, 1.70GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology Intel Core i7-3517U processor (2 cores, 1.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology		Preloaded operating system ²⁰ - Windows® 8 Pro 64-bit Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage• Password Manager• Fingerprint Software (fingerprint models)• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Microsoft Office preloaded; purchase a product key to activate• Skype™
Memory	2GB, 4GB or 8GB / PC3-10600 1333MHz DDR3 / soldered to systemboard, no SO-DIMM sockets		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable		
mSATA™ SSD	<i>Some:</i> 24GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color, smudgeless and anti-reflective display with Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, rotate and swivel hinge <i>Bottom buttons:</i> volume up / down and Windows buttons <i>Side buttons:</i> power and auto rotation buttons		
Multi-touch Camera	Projected Capacitive Touch (PCT) technology, supports 5-point multi-touch HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 4000 in processor, supports external digital monitor via Mini HDMI and Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (Mini DisplayPort) @60Hz; 1920x1200 (Mini HDMI) @60Hz		
Keyboard TrackPoint® Touchpad Light sensor ThinkLight™	6-row, 83-key, spill-resistant, multimedia Fn keys TrackPoint pointing device UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch Ambient light sensor None		
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	<i>8-cell:</i> 12.32" x 9.29" x 0.79"; 313mm x 236mm x 20mm <i>8-cell:</i> from 3.50 lb (1.60kg) <i>Display cover:</i> Magnesium + Polyphenylene sulfide (PPS); Integrated Li-Polymer 8-cell, HW Authentication None <i>8-cell (42.4Whr):</i> up to 6.0 hr <i>Bottom:</i> Magnesium + PPS		
Chipset Multicard Reader ExpressCard Smart Card Read Ports	Mobile Intel HM77 Express Chipset 4-in-1 reader (SD, SDHC, SDXC, MMC) None None Two USB 3.0, external monitor (mini-HDMI, mini-DisplayPort), ethernet (RJ-45)		
PCIe Mini Card PCIe WLAN ⁴ PCIe WWAN SIM card Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2 None None None Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card Gigabit Network Connection Realtek® RTL8111F, PHY, PCIe x1 None High Definition (HD) Audio, Realtek ALC3202 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant		
Security Security chip Fingerprint reader	None None None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹²		
For Lenovo²² service upgrade options, please go to S-EDGE sheet		

See footnotes for more detailed information
US model(s) announced October 23, 2012

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ThinkPad Twist S230u (3347) - TopSeller (Ultrabook) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	SIM card	Top color	Blue-tooth	Bat-tery cells	Preload	Ann date (mm/yy)
3347-7EU	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n ²⁸	24GB	None	Black	BT	8	Win8 Pro64	02/13
3347-7DU	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	Intel 2230	24GB	None	Black	BT	8	Win8 Pro64	02/13
3347-7CU	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	128G SSD	Intel 2230	None	None	Black	BT	8	Win8 Pro64	02/13
3347-7BU	i5-3427U	4GB	12.5" HD <i>Multi</i>	720p	128G SSD	TP 11a/b/g/n	None	None	Black	BT	8	Win8 Pro64	02/13
3347-78U	i5-3337U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	Intel 2230	24GB	None	Black	BT	8	Win8 Pro64	02/13
3347-77U	i7-3537U	8GB	12.5" HD <i>Multi</i>	720p	128G SSD	TP 11a/b/g/n	None	None	Black	BT	8	Win8 Pro64	02/13
3347-76U	i5-3337U	4GB	12.5" HD <i>Multi</i>	720p	128G SSD	TP 11a/b/g/n	None	None	Black	BT	8	Win8 Pro64	02/13
3347-6WU	i3-3227U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	02/13
3347-6VU	i5-3337U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 64	02/13
3347-6UU	i5-3337U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	02/13
3347-6LU	i7-3537U	8GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	02/13
3347-8NU	i3-3227U	4GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 64	07/13
3347-8MU	i3-3227U	4GB	12.5" HD <i>Multi</i>	720p	320G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 64	07/13
3347-8LU	i3-3227U	4GB	12.5" HD <i>Multi</i>	720p	320G 7200	TP 11a/b/g/n	24GB	None	Black	BT	8	Win8 Pro64	07/13
Positioning Processor	<i>Convertible tablet ultrabook™; one spindle</i> Intel® Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology Intel Core i7-3537U processor (2 cores, 2.00GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology									Preloaded operating system²⁰ - Some: Windows 8 64-bit - Some: Windows 8 Pro 64-bit Preloaded applications¹⁴ (only some listed) • Lenovo Support • Lenovo Companion • Lenovo Cloud Storage • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Norton™ Internet Security (30 days of virus definitions) • Microsoft Office preloaded; purchase a product key to activate • Skype™			
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3 / soldered to systemboard, no SO-DIMM sockets												
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable <i>Some:</i> 24GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot												
mSATA™ SSD													
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color, smudgeless and anti-reflective display with Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, rotate and swivel hinge <i>Bottom buttons:</i> volume up / down and Windows buttons <i>Side buttons:</i> power and auto rotation buttons												
Multi-touch Camera	Projected Capacitive Touch (PCT) technology, supports 5-point multi-touch HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	Intel HD Graphics 4000 in processor, supports external digital monitor via Mini HDMI and Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (Mini DisplayPort) @60Hz; 1920x1200 (Mini HDMI) @60Hz												
Keyboard TrackPoint®	6-row, 83-key, spill-resistant, multimedia Fn keys												
Touchpad	TrackPoint pointing device												
Light sensor	UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch												
ThinkLight™	Ambient light sensor												
Dimensions ³	<i>8-cell:</i> 12.32" x 9.29" x 0.79"; 313mm x 236mm x 20mm												
Weight ²	<i>8-cell:</i> from 3.50 lb (1.60kg)												
Case material	<i>Display cover:</i> Magnesium + Polyphenylene sulfide (PPS); Integrated Li-Polymer 8-cell, HW Authentication									<i>Bottom:</i> Magnesium + PPS			
Battery - type	None												
Extended Battery	None												
Battery - life ¹⁰	<i>8-cell (42.4Whr):</i> up to 6.0 hr												
Chipset	Mobile Intel HM77 Express Chipset												
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)												
ExpressCard	None												
Smart Card Read	None												
Ports	Two USB 3.0, external monitor (mini-HDMI, mini-DisplayPort), ethernet (RJ-45)												
PCIe Mini Card	Two PCI Express Mini Card slots												
PCIe WLAN ⁴	<i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2												
PCIe WWAN	None												
SIM card	None												
Modem	None									Supports ThinkVantage® technologies			
Bluetooth™	Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card												
Ethernet	Gigabit Network Connection Realtek® RTL8111F, PHY, PCIe x1												
Intel AMT	None												
Audio support	High Definition (HD) Audio, Realtek ALC3202 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack									65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	None												
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available									For Lenovo ²² service upgrade options, please go to S-EDGE sheet			

See footnotes for more detailed information
 US model(s) announced February 5, February 19, or July 16, 2013

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 (TANR1-3) August 2013

ThinkPad Twist S230u (3347) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	SIM card	Top color	Blue-tooth	Bat-tery cells	Preload	Ann date (mm/yy)
3347-2PU	i3-2365M	2GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n ²⁸	16GB	None	Black	BT	8	Win8 Pro64	10/12
3347-79U	i3-2375M	2GB	12.5" HD <i>Multi</i>	720p	320G 7200	TP 11a/b/g/n	16GB	None	Black	BT	8	Win8 Pro64	02/13
3347-84U	i3-2375M	2GB	12.5" HD <i>Multi</i>	720p	500G 7200	TP 11a/b/g/n	16GB	None	Black	BT	8	Win8 Pro64	05/13
3347-83U	i3-2375M	2GB	12.5" HD <i>Multi</i>	720p	320G 7200	TP 11a/b/g/n	16GB	None	Black	BT	8	Win8 64	05/13

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 1-year limited warranty**

Positioning Processor	<i>Convertible tablet; one spindle</i> Intel® Core™ i3-2365M processor (2 cores, 1.40GHz, 3MB Cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2375M processor (2 cores, 1.50GHz, 3MB Cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Windows® 8 64-bit - <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Support• Lenovo Companion• Lenovo Cloud Storage• Password Manager• Fingerprint Software (fingerprint models)• ThinkVantage System Update• Norton™ Internet Security (30 days of virus definitions)• Microsoft Office preloaded; purchase a product key to activate• Skype™
Memory	2GB / PC3-10600 1333MHz DDR3 / soldered to systemboard, no SO-DIMM sockets		
Optical SATA disk	None Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™, removable, upgradable		
mSATA™ SSD	16GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color, smudgeless and anti-reflective display with Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, rotate and swivel hinge <i>Bottom buttons:</i> volume up / down and Windows buttons <i>Side buttons:</i> power and auto rotation buttons		
Multi-touch Camera	Projected Capacitive Touch (PCT) technology, supports 5-point multi-touch HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, supports external digital monitor via Mini HDMI and Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (Mini DisplayPort) @60Hz; 1920x1200 (Mini HDMI) @60Hz		
Keyboard	6-row, 83-key, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint pointing device		
Touchpad	UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch		
Light sensor	Ambient light sensor		
ThinkLight™	None		
Dimensions ³	<i>8-cell:</i> 12.32" x 9.29" x 0.79"; 313mm x 236mm x 20mm		
Weight ²	<i>8-cell:</i> from 3.50 lb (1.60kg)		
Case material	<i>Display cover:</i> Magnesium + Polyphenylene sulfide (PPS); <i>Bottom:</i> Magnesium + PPS		
Battery - type	Integrated Li-Polymer 8-cell, HW Authentication		
Extended Battery	None		
Battery - life ¹⁰	<i>8-cell (42.4Whr):</i> up to 6.0 hr		
Chipset	Mobile Intel HM77 Express Chipset		
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	None		
Smart Card Read	None		
Ports	Two USB 3.0, external monitor (mini-HDMI, mini-DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, Wi-Fi + Bluetooth combo adapter, 2x2		
PCIe WWAN	None		
SIM card	None		
Modem	None		
Bluetooth™	Bluetooth 4.0 wireless, integrated in WLAN PCIe Half Mini Card		
Ethernet	Gigabit Network Connection Realtek® RTL8111F, PHY, PCIe x1		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Realtek ALC3202 codec / stereo speakers, 2 watt x 2, Dolby® Home Theater® v4 certified / volume up, down, mute buttons / dual array microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

For Lenovo ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
US model(s) announced October 23, 2012; February 19 or May 21, 2013

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ThinkPad Twist S230u Accessories

Product Specifications Reference (PSREF)

Memory

None

Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann	12/11/12
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12

ThinkPad Expansion

None

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

ThinkPad Bluetooth Laser Mouse	0A36407	ann	06/26/12
Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Power adapters

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
⁴⁵ Only compatible with the integrated graphics models.			
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05

More information at www.lenovopowertips.com

Carrying Cases

Up to 13.3" widescreen models:			
ThinkPad Ultraportable Case	41U5062	ann	05/13/08

Up to 15.6" widescreen models:

Lenovo Performance BackPack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Lenovo Sport Backpack - Red	0A33896	ann	02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann	02/28/12
Lenovo Sport Messenger - Red	0A33898	ann	02/28/12

More information at www.lenovo.com/support/cases

Monitors

ThinkVision LT2323p Wide 23" (VGA, DP, DVI-D) ⁶⁹	3024HB1	ann	09/13/11
Lenovo LS2023 Wide 20" (VGA, DVI)	3778HB2	ann	08/02/11
Lenovo LS1922 Wide 18.5" (VGA)	2580AF1	ann	08/02/11
Lenovo LS2223 Wide 21.5" (VGA, DVI)	3783HB2	ann	08/02/11
Lenovo LS2323 Wide 23" (VGA, DVI)	3794HB1	ann	08/02/11

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo Mini DisplayPort to VGA Adapter	0A36536	ann	05/17/11
Lenovo Mini DisplayPort to SL-DVI-D Adapter	0B47090	ann	06/12/12
Lenovo Mini DisplayPort to DisplayPort Cable	0B47091	ann	07/24/12
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see: <http://www2.partnerinfo.lenovo.com/partners/us/resources/salestoolkit.shtml>

TopSeller service upgrade options for ThinkPad 8/Tablet 2 and Helix	
ThinkPad 8/Tablet 2 with 1-year Depot warranty	
3 YEAR Depot Warranty	04W8773
3 YEAR Depot Warranty & ThinkPad Protection	04W8775
3 YEAR Onsite Warranty	04W8774
3 YEAR Onsite Warranty & ThinkPad Protection	04W8776
ThinkPad Helix with 1-year Depot warranty	
3 YEAR Depot Warranty	04W8692
3 YEAR Onsite Warranty	04W8693
ThinkPad Helix with 3-year Depot warranty	
3 YEAR Onsite Warranty	04W8699
TopSeller Priority Support	
<ul style="list-style-type: none"> • 24x7 support with priority routing and advanced level technicians 	
ThinkPad 8/Tablet 2, Helix notebook with 1-year or 3-year Depot warranty	
Add to 1-year or 3-year warranty coverage - 3-year Priority Support*	04W8720
* Covered machine must have concurrent warranty coverage.	

Partial list of Lenovo Services²² for ThinkPad notebooks

For more information see: http://www.lenovo.com/services_warranty/us/en/index.html

Lenovo service upgrade options for ThinkPad 8/Tablet 2 and Helix

ThinkPad 8/Tablet 2 with 1-year Depot warranty

2 YEAR Depot Warranty	04W8312
3 YEAR Depot Warranty	04W8319
1 YEAR Onsite Warranty	04W8326
2 YEAR Onsite Warranty	04W8330
3 YEAR Onsite Warranty	04W8337

ThinkPad Helix with 1-year Depot warranty

2 YEAR Depot Warranty	41C9169
3 YEAR Depot Warranty	41C9170
4 YEAR Depot Warranty	41C9172
1 YEAR Onsite Warranty	41C9166
2 YEAR Onsite Warranty	41C9167
3 YEAR Onsite Warranty	41C9168
4 YEAR Onsite Warranty	41C9171

ThinkPad Helix with 3-year Depot warranty

4 YEAR Depot Warranty	41C9178
3 YEAR Onsite Warranty	41C9176
4 YEAR Onsite Warranty	41C9177

ThinkPad Helix with 3-year Onsite warranty

4 YEAR Onsite Warranty	12X5630
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ThinkPad Yoga notebooks with 1-year Depot warranty

2 YEAR Depot Warranty	5WS0E97281
3 YEAR Depot Warranty	5WS0E97328
2 YEAR Onsite Warranty	5WS0E97258
3 YEAR Onsite Warranty	5WS0E97384

ThinkPad Twist S230u notebook with 1-year Depot warranty

2 YEAR Depot Warranty	0C07006
3 YEAR Depot Warranty	0C07010
1 YEAR Onsite Warranty	45K5968
2 YEAR Onsite Warranty	0C07007
3 YEAR Onsite Warranty	0C07011

Disclaimer

Lenovo provides the information in the Product Specifications Reference (PSREF) withdrawn product books on an "AS-IS" basis. Because the actual products have been withdrawn from marketing, the information in these withdrawn product books is no longer maintained or updated. The referenced footnote numbering may not correspond with the listed footnotes.

PSREF books for the withdrawn systems:

http://www.lenovo.com/psref/psrefs_withdrawn.html

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, go to http://support.lenovo.com/en_US/product-service/warranty-status/WarrantyPolicies.page. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

- ¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
- ² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
- ³ **Thinness** may vary at certain points on the system.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- ⁵ **TAA:** ThinkPad notebook is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.
- ⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
- ⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.
- ⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ⁹ **CD/DVD drive speeds** list maximum rates; rates are variable and are often less than the maximum.
- ¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2012 during testing. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- ¹¹ **External monitor:** This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.
- ¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ¹³ **Internet access not included.**
- ¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.
- ¹⁶ **Activating Verizon Wireless Service:** Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service, airtime, and early termination charges may apply. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.
- ¹⁷ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For ThinkPad notebooks with Depot or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.
- ¹⁹ **Depot repair service:** The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.
- ²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.
- ²¹ **For combination drives,** maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.

²² **Lenovo Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. For ThinkPad notebooks requiring LCD or other component replacement, Lenovo may choose to perform service at the depot repair center. Calls must be received by 5 pm local time in order to qualify for Next Business Day service. P&L means parts and labor. P/U means pick-up. See Lenovo Warranty Services terms and conditions for complete details and restrictions.

²³ **Activating AT&T Wireless Service:** Requires separate agreement with AT&T, subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

²⁴ **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

²⁶ **Full-size keyboard:** As defined by ISO/IEC 15412.

²⁷ **Based on IEEE 802.11a and 802.11b.** A customer can not upgrade to a different wireless Mini PCI adapter due to FCC regulations. Security screws prevent removal of this adapter. This wireless LAN product has been designed to permit legal operation world-wide in regions which it is approved. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

³⁰ **Measures only maximum** data transfer rate, not application performance. Many factors affect application performance.

³² **Wireless:** Based on IEEE 802.11a, 802.11b, and 802.11g respectively. An adapter with 11a/b, 11b/g, or 11a/b/g can communicate on either/any of these listed formats respectively, the actual connection will be based on the access point to which it connects.

³⁶ **Wireless upgradable** allows the system to be wireless-enabled with an optional wireless Mini PCI or Mini PCI Express card. Designed to operate only with Lenovo options.

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TTCBOOK_US.pdf

The logo for ThinkCentre U.S. features the word "ThinkCentre" in a large, bold, black sans-serif font, with a red dot above the "i". To its right is a blue rectangular box with a white border, containing the text "U.S." in a white, bold, sans-serif font.

Product Specifications Reference

Version 452, April 2014

® laptops

Version 452, April 2014

ThinkCentre® Desktops

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

Additions in this update

► New product(s)

None

► New model(s)

ThinkCentre M83 SFF Pro (10AM) - TopSeller - II, new models announced April 2014 (MSK1S-5)

ThinkCentre M73 Tiny (10AY) - TopSeller - II, new models announced April 2014 (MLM1N-7)

ThinkCentre M73 Tiny (10AX), new models announced April 2014 (MLM1N-2)

ThinkCentre E93z (10B8) - TopSeller, new models announced April 2014 (TRPL1-1)

ThinkCentre M78 Tower (10BR) - TopSeller, new models announced April 2014 (ADR1T-1)

Withdrawals in this update

► Withdrawn Product(s)

Older ThinkCentre M72e withdrawn, moved to Idwbook

Older ThinkCentre M82 withdrawn, moved to Idwbook

Older ThinkCentre M92/M92p withdrawn, moved to Idwbook

Recently Launched Think Accessories



ThinkPad Compact Bluetooth Keyboard with Trackpoint
(PN: 0B47189)



Lenovo Wireless TouchPad for Windows 8
(PN: 0A33909)



ThinkPad Noise Cancelling Earbuds
(PN: 0B47313)

Additional Think Accessories



ThinkPad USB 3.0 Portable Secure HDD (500GB , 750GB, 1TB)
(PN: 0A65619, 0A65616, 0A65621)



Kensington MicroSaver Security Cable Lock from Lenovo
(PN: 73P2582)



Lenovo Ultralim Wireless Keyboard and Mouse Combo
(PN: 0A34032)

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LENOVO THINK ACCESSORIES

Lenovo Quick Pick (<http://www.lenovoquickpick.com/>) is an options compatibility configurator for Lenovo systems.

For more information on the various ThinkCentre systems, please see below :

<p><u>ThinkCentre M72e</u></p> <p>M72e Tiny 4004/3264/3267 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m72e-tiny</p> <p>M72e Small 0967/3598/3660/3664 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m72e-sff</p> <p>M72e Tower 0958/3675/3597/3655/3662 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m72e-tower</p>	<p><u>ThinkCentre M91/M91p</u></p> <p>M91/M91p Eco USFF 7519/7516/0266/5067 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m91-m91p-eco-usff</p> <p>M91/M91p Small 4480/4518/7033 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m91-m91p-sff</p> <p>M91/M91p Tower 7052/4524/7034 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m91-m91p-tower</p>
<p><u>ThinkCentre M72z</u></p> <p>M72z AIO 3543/3548/3554/3558/ www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m72z-aio</p>	<p><u>ThinkCentre M92/M92p</u></p> <p>M92/M92p Tiny 3234/3229/2121/3243/3238/3237 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m92-m92p-tiny</p>
<p><u>ThinkCentre M77</u></p> <p>M77 Small 2227/2209/1996/1997 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m77-sff</p> <p>M77 Tower 1995/1990/1982/1983 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m77-tower</p>	<p>M92/M92p Small 3207/2988/3209/3227 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m92-m92p-sff</p> <p>M92/M92p Tower 3208/2992/3212/3228 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m92-m92p-tower</p>
<p><u>ThinkCentre M78</u></p> <p>M78 Small 5100/4865/2113/2114 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m78-sff</p> <p>M78 Tower 2111/1766/1562/1565 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m78-tower</p>	<p><u>ThinkCentre M92z</u></p> <p>M92z AIO 3280/3291/3296/32989/3315/3318/3325/3327/3311/3314/3329 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m92z-aio</p>
<p><u>ThinkCentre M82</u></p> <p>M82 Small 3306/3395/2756/2929 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m82-sff</p> <p>M82 Tower 3302/3392/2697/2742 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m82-tower</p>	<p><u>ThinkCentre Edge 72</u></p> <p>Edge 72 Small 3493 www.lenovoquickpick.com/usa/system/thinkcentre/edge-series/edge-72-sff</p> <p>Edge 72 Tower 3484 www.lenovoquickpick.com/usa/system/thinkcentre/edge-series/edge-72-tower</p>
<p><u>ThinkCentre M90z</u></p> <p>M90z AIO 3429/5205 www.lenovoquickpick.com/usa/system/thinkcentre/m-series/m90z-aio</p>	<p><u>ThinkCentre Edge 92z</u></p> <p>Edge 92z AIO 3396/3399/3418/3426/3414/3417 www.lenovoquickpick.com/usa/system/thinkcentre/edge-series/edge-92z-aio</p>

ThinkCentre M32 Thin Client

ThinkCentre®



Lenovo ThinkCentre M32 Thin Client
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M32 Thin Client



Lenovo ThinkCentre M32 Thin Client



Lenovo ThinkCentre M32 Thin Client



Lenovo ThinkCentre M32 Thin Client
(inside view)



Lenovo ThinkCentre M32 Thin Client

ThinkCentre M32 (10BV) - Thin Client (TopSeller) - 1-year depot

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Flash Memory	Optical	Graphics	DP to DVI dongle	Floor stand	Key-board/ Mouse	ENERGY STAR 5.2 Global	OS preload	Ann date (mm/dd/yy)
10BV0006US	Celeron 807	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS 09/03/13
10BV0009US	Celeron 807	4GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS 09/03/13
10BV0007US	Celeron 807	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 09/03/13
10BV0008US	Celeron 807	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 09/03/13
10BV000EUS	Celeron 847	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS 12/10/13
10BV000FUS	Celeron 847	4GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS 12/10/13
10BV000AUS	Celeron 847	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 12/10/13
10BV000BUS	Celeron 847	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 12/10/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year depot warranty

Positioning	Mainstream Thin Client with better security and manageability for the enterprise		Preloaded operating system Some: Genuine Windows® Embedded Standard 7 (WES 7) Some: LeTOS (Lenovo Terminal Operating System, Linux-based)
Processor	Intel® Celeron® Processor 807 (1 cores / 2 threads, 1.5GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Celeron Processor 847 (2 cores / 2 threads, 1.1GHz, 2MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology		
Memory	4GB max, PC3-12800 1600MHz DDR3*, one 204-pin SODIMM socket (notebook) * System automatically clocks down for processors with 1333MHz DDR3 memory controller		Preloaded applications (only some listed) - WES 7 only: <ul style="list-style-type: none">● Intel Management Engine Components● RDP Client● Citrix Client● VMware Client● Internet Explorer 9● Java● Flash● .Net Framework● Microsoft® Silverlight● Echo Agent● Ultra VNC● Adobe Reader● Intel Manageability Engine Firmware Recovery Agent - LeTOS only: <ul style="list-style-type: none">● xFreeRDP● Citrix ICA Client● VMware View Client● Java● Mozilla Firefox● NX NoMachine Client● X11 Client● VDI-In-A-Box Java Client● AnyConnect VPN Client Network-based Thin Client Management Tool - Lenovo Thin Client Manager (LTM)* *A license is included with the purchase of M32 and the utility is downloadable from website
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; Maximum resolution: 2560x2048 (DisplayPort) @60Hz; 2560x1600 (VGA) @60Hz Optional DisplayPort to Single-link DVI-D dongle		
DP dongle	Optional DisplayPort to Single-link DVI-D dongle		
Flash Memory	1GB (LeTOS models) or 8GB (WES 7 models) / DOM (Disk On Module) Card		
Optical	None		
SATA controller	Serial ATA, SATA 3.0Gb/s support, integrated in chipset		
Onboard SATA	one SATA 3.0Gb/s connector for DOM Card		
eSATA port	None		
Chipset	Mobile Intel NM70 Express Chipset		
Front ports	Four USB 2.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Two USB 2.0, ethernet (RJ-45), two PS/2 ports (keyboard and mouse), one parallel, four serial ports (Customizable Pin definition for serial port 2, 3, and 4), one VGA, one DisplayPort		
PCIe Mini Card	None		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662-VD codec		
Speaker	None		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Realtek RTL8111F, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
VESA mount	Supports VESA 100mm mount standard		
Power supply	65 watts adapter, autosensing 100-240V, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color; USFF (2L)● Fan-less, Cable-less Design● (Without stand) 2.2" W X 6.7" D X 8.7" H● (Without stand) 55mm W X 170mm D X 220mm H● (Without stand) 3.3 lb (1.48 kg) in maximum configuration		
Protocols	Citrix: Microsoft: VMWare:	ICA, HDX (compatible with XenDesktop and XenApp) RDP, RemoteFX (WES 7 models only), RDS VMware Horizon View through RDP VMware Horizon View through PCoIP	
Limited Warranty	1-years, depot repair service / service upgrades available		

See footnotes for important warranty information

US model(s) announced September 3, 2013 or December 10, 2013

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(CLVL1-3) December 2013

ThinkCentre M32 (10BV) - Thin Client (TopSeller) - 1-year onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁸	Flash Memory	Optical	Graphics	DP to DVI dongle	Floor stand	Key- board/ Mouse	ENERGY STAR 5.2 Global	OS preload	Ann date (mm/dd/yy)	
10BV0005US	Celeron 807	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	09/03/13
10BV0001US	Celeron 807	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	09/03/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Processor		Mainstream Thin Client with better security and manageability for the enterprise		Preloaded operating system	
	Processor		Intel® Celeron® Processor 807 (1 cores / 2 threads, 1.5GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology		Some: Genuine Windows® Embedded Standard 7 (WES 7)	
	Memory		4GB max, PC3-12800 1600MHz DDR3*, one 204-pin SODIMM socket (notebook) * System automatically clocks down for processors with 1333MHz DDR3 memory controller		Some: LeTOS (Lenovo Terminal Operating System, Linux-based)	
	Graphics		Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; Maximum resolution: 2560x2048 (DisplayPort) @60Hz; 2560x1600 (VGA) @60Hz Optional DisplayPort to Single-link DVI-D dongle		Preloaded applications (only some listed)	
	DP dongle				- WES 7 only:	
	Flash Memory		1GB (LeTOS models) or 8GB (WES 7 models) / DOM (Disk On Module) Card		• Intel Management Engine Components	
	Optical		None		• RDP Client	
	SATA controller		Serial ATA, SATA 3.0Gb/s support, integrated in chipset		• Citrix Client	
	Onboard SATA		one SATA 3.0Gb/s connector for DOM Card		• VMware Client	
	eSATA port		None		• Internet Explorer 9	
	Chipset		Mobile Intel NM70 Express Chipset		• Java	
	Front ports		Four USB 2.0, microphone (3.5mm), headphone (3.5mm)		• Flash	
	Rear ports		Two USB 2.0, ethernet (RJ-45), two PS/2 ports (keyboard and mouse), one parallel, four serial ports (Customizable Pin definition for serial port 2, 3, and 4), one VGA, one DisplayPort		• .Net Framework	
	PCIe Mini Card		None		• Microsoft® Silverlight	
	PCIe WLAN		None		• Echo Agent	
	Bluetooth		None		• Ultra VNC	
	Audio		High Definition (HD) Audio, Realtek® ALC662-VD codec		• Adobe Reader	
	Speaker		None		• Intel Manageability Engine Firmware Recovery Agent	
	IEEE 1394		None		- LeTOS only:	
	Ethernet		One gigabit ethernet port, Realtek RTL8111F, Wake on LAN®		• xFreeRDP	
	Intel AMT		None		• Citrix ICA Client	
	Modem		None		• VMware View Client	
	Security chip		None		• Java	
	Keyboard		Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		• Mozilla Firefox	
	Mouse		Enhanced Optical USB Mouse, black, Lenovo logo		• NX NoMachine Client	
	Floor Stand		System floor stand for vertical orientation		• X11 Client	
	VESA mount		Supports VESA 100mm mount standard		• VDI-In-A-Box Java Client	
	Power supply		65 watts adapter, autosensing 100-240V, 85% PSU		• AnyConnect VPN Client	
	Machine		• Business black color; USFF (2L) • Fan-less, Cable-less Design • (Without stand) 2.2" W X 6.7" D X 8.7" H • (Without stand) 55mm W X 170mm D X 220mm H • (Without stand) 3.3 lb (1.48 kg) in maximum configuration		Network-based Thin Client Management Tool - Lenovo Thin Client Manager (LTM)* *A license is included with the purchase of M32 and the utility is downloadable from website	
	Protocols		Citrix: ICA, HDX (compatible with XenDesktop and XenApp) Microsoft: RDP, RemoteFX (WES 7 models only), RDS VMWare: VMware Horizon View through RDP VMware Horizon View through PCoIP		Security	
					• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)	
					• Power-on password	
					• Administrator password	
					• Boot sequence control	
					• Boot without keyboard and mouse	
					• Individual USB port disablement	
					• Serial port and parallel port disablement	
					EPEAT™ Gold rating (WES models) ENERGY STAR® 5.2 (WES models) GREENGUARD® certified RoHS-compliant WEEE REACH VMWare Ready Certification Citrix Ready/HDX Ready Certification MS RemoteFX Certification (WES models)	
					For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Limited Warranty	1-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available					

See footnotes for important warranty information
US model(s) announced September 3, 2013

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ThinkCentre M32 (10BV) - Thin Client (TopSeller) - 3-year onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁸	Flash Memory	Optical	Graphics	DP to DVI dongle	Floor stand	Key- board/ Mouse	ENERGY STAR 5.2 Global	OS preload	Ann date (mm/dd/yy)	
10BV0004US	Celeron 807	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	09/03/13
10BV0000US	Celeron 807	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	09/03/13
10BV0002US	Celeron 807	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	09/03/13
10BV000GUS	Celeron 847	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	12/10/13
10BV000HUS	Celeron 847	4GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	12/10/13
10BV000CUS	Celeron 847	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	12/10/13
10BV000DUS	Celeron 847	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	12/10/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	Mainstream Thin Client with better security and manageability for the enterprise							Preloaded operating system				
Processor	Intel® Celeron® Processor 807 (1 cores / 2 threads, 1.5GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology							Some: Genuine Windows® Embedded Standard 7 (WES 7)				
	Intel Celeron Processor 847 (2 cores / 2 threads, 1.1GHz, 2MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology							Some: LeTOS (Lenovo Terminal Operating System, Linux-based)				
Memory	4GB max, PC3-12800 1600MHz DDR3* , one 204-pin SODIMM socket (notebook) * System automatically clocks down for processors with 1333MHz DDR3 memory controller							Preloaded applications (only some listed)				
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x2048 (DisplayPort) @60Hz; 2560x1600 (VGA) @60Hz Optional DisplayPort to Single-link DVI-D dongle							- WES 7 only:				
DP dongle								<ul style="list-style-type: none"> • Intel Management Engine Components • RDP Client • Citrix Client • VMware Client • Internet Explorer 9 • Java • Flash • .Net Framework • Microsoft® Silverlight • Echo Agent • Ultra VNC • Adobe Reader • Intel Manageability Engine Firmware Recovery Agent 				
Flash Memory	1GB (LeTOS models) or 8GB (WES 7 models) / DOM (Disk On Module) Card							- LeTOS only:				
Optical	None							<ul style="list-style-type: none"> • xFreeRDP • Citrix ICA Client • VMware View Client • Java • Mozilla Firefox • NX NoMachine Client • X11 Client • VDI-In-A-Box Java Client • AnyConnect VPN Client 				
SATA controller	Serial ATA, SATA 3.0Gb/s support, integrated in chipset							Network-based Thin Client Management Tool - Lenovo Thin Client Manager (LTM)*				
Onboard SATA	one SATA 3.0Gb/s connector for DOM Card							*A license is included with the purchase of M32 and the utility is downloadable from website				
eSATA port	None							Security				
Chipset	Mobile Intel NM70 Express Chipset							<ul style="list-style-type: none"> • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard and mouse • Individual USB port disablement • Serial port and parallel port disablement 				
Front ports	Four USB 2.0, microphone (3.5mm), headphone (3.5mm)							EPEAT™ Gold rating (WES models)				
Rear ports	Two USB 2.0, ethernet (RJ-45), two PS/2 ports (keyboard and mouse), one parallel, four serial ports (Customizable Pin definition for serial port 2, 3, and 4), one VGA, one DisplayPort							ENERGY STAR® 5.2 (WES models)				
PCIe Mini Card	None							GREENGUARD® certified				
PCIe WLAN	None							RoHS-compliant				
Bluetooth	None							WEEE				
Audio	High Definition (HD) Audio, Realtek® ALC662-VD codec							REACH				
Speaker	None							VMware Ready Certification				
IEEE 1394	None							Citrix Ready/HDX Ready Certification				
Ethernet	One gigabit ethernet port, Realtek RTL8111F, Wake on LAN®							MS RemoteFX Certification (WES models)				
Intel AMT	None							For compatible accessories, please go to TC-AQP sheet;				
Modem	None							For Lenovo service upgrade options, please go to S-TC sheet				
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
VESA mount	Supports VESA 100mm mount standard											
Power supply	65 watts adapter, autosensing 100-240V, 85% PSU											
Machine	<ul style="list-style-type: none"> • Business black color; USFF (2L) • Fan-less, Cable-less Design • (Without stand) 2.2" W X 6.7" D X 8.7" H • (Without stand) 55mm W X 170mm D X 220mm H • (Without stand) 3.3 lb (1.48 kg) in maximum configuration 											
Protocols	Citrix: ICA, HDX (compatible with XenDesktop and XenApp) Microsoft: RDP, RemoteFX (WES 7 models only), RDS VMware: VMware Horizon View through RDP VMware Horizon View through PCoIP											
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information

US model(s) announced September 3, 2013 or December 10, 2013

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ThinkCentre M32 (10BM) - Thin Client (1-year depot)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁶	Flash Memory	Optical	Graphics	DP to DVI dongle	Floor stand	Key- board/ Mouse	ENERGY STAR 5.2 Global	OS preload	Ann date (mm/dd/yy)	
10BM0001US	Celeron 807	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	09/03/13
10BM0004US	Celeron 807	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	09/03/13
10BM000MUS	Celeron 807	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	09/03/13
10BM000TUS	Celeron 807	4GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	12/10/13
10BM0013US	Celeron 847	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	12/10/13
10BM0015US	Celeron 847	4GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	12/10/13
10BM000YUS	Celeron 847	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	12/10/13
10BM0010US	Celeron 847	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	12/10/13

• 1-year depot warranty

Positioning Processor	<i>Mainstream Thin Client with better security and manageability for the enterprise</i> Intel® Celeron® Processor 807 (1 cores / 2 threads, 1.5GHz, 1.5MB cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Celeron Processor 847 (2 cores / 2 threads, 1.1GHz, 2MB cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology		Preloaded operating system <i>Some:</i> Genuine Windows® Embedded Standard 7 (WES 7) <i>Some:</i> LeTOS (Lenovo Terminal Operating System, Linux-based)
Memory	4GB max, PC3-12800 1600MHz DDR3* , one 204-pin SODIMM socket (notebook) * System automatically clocks down for processors with 1333MHz DDR3 memory controller		Preloaded applications (only some listed) - WES 7 only: <ul style="list-style-type: none">● Intel Management Engine Components● RDP Client● Citrix Client● VMware Client● Internet Explorer 9● Java● Flash● .Net Framework● Microsoft® Silverlight● Echo Agent● Ultra VNC● Adobe Reader● Intel Manageability Engine Firmware Recovery Agent
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x2048 (DisplayPort) @60Hz; 2560x1600 (VGA) @60Hz Optional DisplayPort to Single-link DVI-D dongle		- LeTOS only: <ul style="list-style-type: none">● xFreeRDP● Citrix ICA Client● VMware View Client● Java● Mozilla Firefox● NX NoMachine Client● X11 Client● VDI-In-A-Box Java Client● AnyConnect VPN Client
DP dongle			
Flash Memory	1GB (LeTOS models) or 8GB (WES 7 models) / DOM (Disk On Module) Card		Network-based Thin Client Management Tool - Lenovo Thin Client Manager (LTM)* *A license is included with the purchase of M32 and the utility is downloadable from website
Optical	None		
SATA controller	Serial ATA, SATA 3.0Gb/s support, integrated in chipset		
Onboard SATA	one SATA 3.0Gb/s connector for DOM Card		
eSATA port	None		
Chipset	Mobile Intel NM70 Express Chipset		
Front ports	Four USB 2.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Two USB 2.0, ethernet (RJ-45), two PS/2 ports (keyboard and mouse), one parallel, four serial ports (Customizable Pin definition for serial port 2, 3, and 4), one VGA, one DisplayPort		
PCIe Mini Card	None		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662-VD codec		
Speaker	None		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Realtek RTL8111F, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
VESA mount	Supports VESA 100mm mount standard		
Power supply	65 watts adapter, autosensing 100-240V, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color; USFF (2L)● Fan-less, Cable-less Design● (Without stand) 2.2" W X 6.7" D X 8.7" H● (Without stand) 55mm W X 170mm D X 220mm H● (Without stand) 3.3 lb (1.48 kg) in maximum configuration		
Protocols	Citrix: Microsoft: VMWare:	ICA, HDX (compatible with XenDesktop and XenApp) RDP, RemoteFX (WES 7 models only), RDS VMware Horizon View through RDP VMware Horizon View through PCoIP	EPEAT™ Gold rating (WES models) ENERGY STAR® 5.2 (WES models) GREENGUARD® certified RoHS-compliant WEEE REACH VMWare Ready Certification Citrix Ready/HDX Ready Certification MS RemoteFX Certification (WES models)
Limited Warranty	1-years, depot repair service / service upgrades available		For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US model(s) announced September 3, 2013 or December 10, 2013

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(CLVL1-6) December 2013

ThinkCentre M32 (10BM) - Thin Client (1-year onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁸	Flash Memory	Optical	Graphics	DP to DVI dongle	Floor stand	Key- board/ Mouse	ENERGY STAR 5.2 Global	OS preload	Ann date (mm/dd/yy)	
10BM0000US	Celeron 807	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS	09/03/13
10BM0002US	Celeron 807	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7	09/03/13

• 1-year limited warranty

Positioning	Processor		Mainstream Thin Client with better security and manageability for the enterprise		Preloaded operating system	
	Processor		Intel® Celeron® Processor 807 (1 cores / 2 threads, 1.5GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology		Some: Genuine Windows® Embedded Standard 7 (WES 7)	
	Memory		4GB max, PC3-12800 1600MHz DDR3*, one 204-pin SODIMM socket (notebook) * System automatically clocks down for processors with 1333MHz DDR3 memory controller		Some: LeTOS (Lenovo Terminal Operating System, Linux-based)	
	Graphics		Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; Maximum resolution: 2560x2048 (DisplayPort) @60Hz; 2560x1600 (VGA) @60Hz Optional DisplayPort to Single-link DVI-D dongle		Preloaded applications (only some listed)	
	DP dongle				- WES 7 only:	
	Flash Memory		1GB (LeTOS models) or 8GB (WES 7 models) / DOM (Disk On Module) Card		• Intel Management Engine Components	
	Optical		None		• RDP Client	
	SATA controller		Serial ATA, SATA 3.0Gb/s support, integrated in chipset		• Citrix Client	
	Onboard SATA		one SATA 3.0Gb/s connector for DOM Card		• VMware Client	
	eSATA port		None		• Internet Explorer 9	
	Chipset		Mobile Intel NM70 Express Chipset		• Java	
	Front ports		Four USB 2.0, microphone (3.5mm), headphone (3.5mm)		• Flash	
	Rear ports		Two USB 2.0, ethernet (RJ-45), two PS/2 ports (keyboard and mouse), one parallel, four serial ports (Customizable Pin definition for serial port 2, 3, and 4), one VGA, one DisplayPort		• .Net Framework	
	PCIe Mini Card		None		• Microsoft® Silverlight	
	PCIe WLAN		None		• Echo Agent	
	Bluetooth		None		• Ultra VNC	
	Audio		High Definition (HD) Audio, Realtek® ALC662-VD codec		• Adobe Reader	
	Speaker		None		• Intel Manageability Engine Firmware Recovery Agent	
	IEEE 1394		None		- LeTOS only:	
	Ethernet		One gigabit ethernet port, Realtek RTL8111F, Wake on LAN®		• xFreeRDP	
	Intel AMT		None		• Citrix ICA Client	
	Modem		None		• VMware View Client	
	Security chip		None		• Java	
	Keyboard		Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		• Mozilla Firefox	
	Mouse		Enhanced Optical USB Mouse, black, Lenovo logo		• NX NoMachine Client	
	Floor Stand		System floor stand for vertical orientation		• X11 Client	
	VESA mount		Supports VESA 100mm mount standard		• VDI-In-A-Box Java Client	
	Power supply		65 watts adapter, autosensing 100-240V, 85% PSU		• AnyConnect VPN Client	
	Machine		• Business black color; USFF (2L) • Fan-less, Cable-less Design • (Without stand) 2.2" W X 6.7" D X 8.7" H • (Without stand) 55mm W X 170mm D X 220mm H • (Without stand) 3.3 lb (1.48 kg) in maximum configuration		Network-based Thin Client Management Tool - Lenovo Thin Client Manager (LTM)* *A license is included with the purchase of M32 and the utility is downloadable from website	
	Protocols		Citrix: ICA, HDX (compatible with XenDesktop and XenApp) Microsoft: RDP, RemoteFX (WES 7 models only), RDS VMWare: VMware Horizon View through RDP VMware Horizon View through PCoIP		Security	
					• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)	
					• Power-on password	
					• Administrator password	
					• Boot sequence control	
					• Boot without keyboard and mouse	
					• Individual USB port disablement	
					• Serial port and parallel port disablement	
					EPEAT™ Gold rating (WES models) ENERGY STAR® 5.2 (WES models) GREENGUARD® certified RoHS-compliant WEEE REACH VMWare Ready Certification Citrix Ready/HDX Ready Certification MS RemoteFX Certification (WES models)	
					For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Limited Warranty	1-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available					

See footnotes for important warranty information
US model(s) announced September 3, 2013

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ThinkCentre M32 (10BM) - Thin Client (3-year onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Flash Memory	Optical	Graphics	DP to DVI dongle	Floor stand	Key-board/ Mouse	ENERGY STAR 5.2 Global	OS preload	Ann date (mm/dd/yy)
10BM0006US	Celeron 807	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS 09/03/13
10BM0005US	Celeron 807	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 09/03/13
10BM0003US	Celeron 807	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 09/03/13
10BM0008US	Celeron 807	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 09/03/13
10BM000RUS	Celeron 847	2GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS 12/10/13
10BM0014US	Celeron 847	4GBx1	1G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	None	None	LeTOS 12/10/13
10BM0011US	Celeron 847	2GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 12/10/13
10BM0012US	Celeron 847	4GBx1	8G DOM Card	None	Intel HD Graphics	None	Floor stand	USB	ES52	None	WES 7 12/10/13

●3-year limited warranty

Positioning	Mainstream Thin Client with better security and manageability for the enterprise							Preloaded operating system			
Processor	Intel® Celeron® Processor 807 (1 cores / 2 threads, 1.5GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology							Some: Genuine Windows® Embedded Standard 7 (WES 7)			
	Intel Celeron Processor 847 (2 cores / 2 threads, 1.1GHz, 2MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology							Some: LeTOS (Lenovo Terminal Operating System, Linux-based)			
Memory	4GB max, PC3-12800 1600MHz DDR3* , one 204-pin SODIMM socket (notebook) * System automatically clocks down for processors with 1333MHz DDR3 memory controller							Preloaded applications (only some listed)			
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x2048 (DisplayPort) @60Hz; 2560x1600 (VGA) @60Hz Optional DisplayPort to Single-link DVI-D dongle							- WES 7 only:			
DP dongle								<ul style="list-style-type: none"> Intel Management Engine Components RDP Client Citrix Client VMware Client Internet Explorer 9 Java Flash .Net Framework Microsoft® Silverlight Echo Agent Ultra VNC Adobe Reader Intel Manageability Engine Firmware Recovery Agent 			
Flash Memory	1GB (LeTOS models) or 8GB (WES 7 models) / DOM (Disk On Module) Card							- LeTOS only:			
Optical	None							<ul style="list-style-type: none"> xFreeRDP Citrix ICA Client VMware View Client Java Mozilla Firefox NX NoMachine Client X11 Client VDI-In-A-Box Java Client AnyConnect VPN Client 			
SATA controller	Serial ATA, SATA 3.0Gb/s support, integrated in chipset							Network-based Thin Client Management Tool - Lenovo Thin Client Manager (LTM)*			
Onboard SATA	one SATA 3.0Gb/s connector for DOM Card							*A license is included with the purchase of M32 and the utility is downloadable from website			
eSATA port	None							Security			
Chipset	Mobile Intel NM70 Express Chipset							<ul style="list-style-type: none"> Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) Power-on password Administrator password Boot sequence control Boot without keyboard and mouse Individual USB port disablement Serial port and parallel port disablement 			
Front ports	Four USB 2.0, microphone (3.5mm), headphone (3.5mm)							EPEAT™ Gold rating (WES models)			
Rear ports	Two USB 2.0, ethernet (RJ-45), two PS/2 ports (keyboard and mouse), one parallel, four serial ports (Customizable Pin definition for serial port 2, 3, and 4), one VGA, one DisplayPort							ENERGY STAR® 5.2 (WES models)			
PCIe Mini Card	None							GREENGUARD® certified			
PCIe WLAN	None							RoHS-compliant			
Bluetooth	None							WEEE			
Audio	High Definition (HD) Audio, Realtek® ALC662-VD codec							REACH			
Speaker	None							VMware Ready Certification			
IEEE 1394	None							Citrix Ready/HDX Ready Certification			
Ethernet	One gigabit ethernet port, Realtek RTL8111F, Wake on LAN®							MS RemoteFX Certification (WES models)			
Intel AMT	None							For compatible accessories, please go to TC-AQP sheet;			
Modem	None							For Lenovo service upgrade options, please go to S-TC sheet			
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo										
Floor Stand	System floor stand for vertical orientation										
VESA mount	Supports VESA 100mm mount standard										
Power supply	65 watts adapter, autosensing 100-240V, 85% PSU										
Machine	<ul style="list-style-type: none"> Business black color; USFF (2L) Fan-less, Cable-less Design (Without stand) 2.2" W X 6.7" D X 8.7" H (Without stand) 55mm W X 170mm D X 220mm H (Without stand) 3.3 lb (1.48 kg) in maximum configuration 										
Protocols	Citrix: ICA, HDX (compatible with XenDesktop and XenApp) Microsoft: RDP, RemoteFX (WES 7 models only), RDS VMware: VMware Horizon View through RDP VMware Horizon View through PCoIP										
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										

See footnotes for important warranty information

US model(s) announced September 3, 2013 or December 10, 2013

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ThinkCentre M32 (10BM) - Thin Client (GMP)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Flash Memory	Optical	Graphics	DP to DVI dongle	Floor stand	Key-board/ Mouse	ENERGY STAR 5.2	Global (G) GMP (P)	OS preload	Ann date (mm/dd/yy)
10BM0009US	Celeron 807	2GBx1	1G DOM Card	None	Intel HD Graphics	DP to DVI	Floor stand	USB	None	G P	LeTOS	09/03/13
10BM000AUS	Celeron 807	2GBx1	8G DOM Card	None	Intel HD Graphics	DP to DVI	Floor stand	USB	ES52	G P	WES 7	09/03/13
10BM000BUS	Celeron 807	4GBx1	8G DOM Card	None	Intel HD Graphics	DP to DVI	Floor stand	USB	ES52	G P	WES 7	09/03/13
10BM0017US	Celeron 847	2GBx1	1G DOM Card	None	Intel HD Graphics	DP to DVI	Floor stand	USB	None	G P	LeTOS	12/24/13
10BM0018US	Celeron 847	2GBx1	8G DOM Card	None	Intel HD Graphics	DP to DVI	Floor stand	USB	ES52	G P	WES 7	12/24/13
10BM0019US	Celeron 847	4GBx1	8G DOM Card	None	Intel HD Graphics	DP to DVI	Floor stand	USB	ES52	G P	WES 7	12/24/13

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- 3-year limited warranty

Positioning Processor	Mainstream Thin Client with better security and manageability for the enterprise Intel® Celeron® Processor 807 (1 cores / 2 threads, 1.5GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Celeron Processor 847 (2 cores / 2 threads, 1.1GHz, 2MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology		Preloaded operating system Some: Genuine Windows® Embedded Standard 7 (WES 7) Some: LeTOS (Lenovo Terminal Operating System, Linux-based)
Memory	4GB max, PC3-12800 1600MHz DDR3* , one 204-pin SODIMM socket (notebook) * System automatically clocks down for processors with 1333MHz DDR3 memory controller		Preloaded applications (only some listed) - WES 7 only: <ul style="list-style-type: none">● Intel Management Engine Components● RDP Client● Citrix Client● VMware Client● Internet Explorer 9● Java● Flash● .Net Framework● Microsoft® Silverlight● Echo Agent● Ultra VNC● Adobe Reader● Intel Manageability Engine Firmware Recovery Agent
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x2048 (DisplayPort) @60Hz; 2560x1600 (VGA) @60Hz Optional DisplayPort to Single-link DVI-D dongle		- LeTOS only: <ul style="list-style-type: none">● xFreeRDP● Citrix ICA Client● VMware View Client● Java● Mozilla Firefox● NX NoMachine Client● X11 Client● VDI-In-A-Box Java Client● AnyConnect VPN Client
DP dongle			Network-based Thin Client Management Tool - Lenovo Thin Client Manager (LTM)* *A license is included with the purchase of M32 and the utility is downloadable from website
Flash Memory	1GB (LeTOS models) or 8GB (WES 7 models) / DOM (Disk On Module) Card		
Optical	None		
SATA controller	Serial ATA, SATA 3.0Gb/s support, integrated in chipset		
Onboard SATA	one SATA 3.0Gb/s connector for DOM Card		
eSATA port	None		
Chipset	Mobile Intel NM70 Express Chipset		
Front ports	Four USB 2.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Two USB 2.0, ethernet (RJ-45), two PS/2 ports (keyboard and mouse), one parallel, four serial ports (Customizable Pin definition for serial port 2, 3, and 4), one VGA, one DisplayPort		
PCIe Mini Card	None		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662-VD codec		
Speaker	None		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Realtek RTL8111F, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
VESA mount	Supports VESA 100mm mount standard		
Power supply	65 watts adapter, autosensing 100-240V, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color; USFF (2L)● Fan-less, Cable-less Design● (Without stand) 2.2" W X 6.7" D X 8.7" H● (Without stand) 55mm W X 170mm D X 220mm H● (Without stand) 3.3 lb (1.48 kg) in maximum configuration		
Protocols	Citrix:	ICA, HDX (compatible with XenDesktop and XenApp)	EPEAT™ Gold rating (WES models) ENERGY STAR® 5.2 (WES models) GREENGUARD® certified RoHS-compliant WEEE REACH VMWare Ready Certification Citrix Ready/HDX Ready Certification MS RemoteFX Certification (WES models)
	Microsoft:	RDP, RemoteFX (WES 7 models only), RDS	
	VMWare:	VMware Horizon View through RDP VMware Horizon View through PCoIP	
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information

US model(s) announced September 3, 2013 or December 24, 2013

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(CLVL1-7) January 2014

ThinkCentre M73 Tiny, Small, Mini Tower

ThinkCentre®



ThinkCentre M73 Tiny
with Optional WLAN



ThinkCentre M73 Tiny with
ThinkVision Monitor



ThinkCentre M73 Tiny
with optional I/O Box



ThinkCentre M73 Tiny with
ThinkVision Monitor



ThinkCentre M73 Tiny with
optional External Optical Box



ThinkCentre M73 Tiny



ThinkCentre M73 Small
and Mini Tower



ThinkCentre M73 Small
with ThinkVision Monitor



ThinkCentre M73 Small



ThinkCentre M73 Mini Tower
with ThinkVision Monitor



ThinkCentre M73 Mini Tower



ThinkCentre M73 Mini Tower

ThinkCentre M73 Tiny (10AY) - Thin Client (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Flash Memory	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Preload	Ann date (mm/dd/yy)
10AY0037US	G1820T	2GBx1	8G DOM Card	None	Intel HD	Intel 105	None	None	Stand	None	USB	WES 7	02/25/14
10AY0038US	G1820T	2GBx1	8G DOM Card	None	Intel HD	Intel 105	None	None	Stand	None	USB	LeTOS	02/25/14
10AY0039US	G1820T	4GBx1	8G DOM Card	None	Intel HD	Intel 105	None	None	Stand	None	USB	WES 7	02/25/14

• 1-year depot warranty

Positioning	Essential business features, exceptional value		Preloaded operating system <i>Some:</i> Genuine Windows® Embedded Standard 7 (WES 7) <i>Some:</i> LeTOS (Lenovo Terminal Operating System, Linux-based)
Processor	Intel® Celeron® G1820T Processor (2 cores / 2 threads, 2.4GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller		
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook), <i>System automatically clocks down for processors with 1333MHz DDR3 memory controller</i>		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports up to dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i>		Preloaded applications (only some listed) - WES 7 only: <ul style="list-style-type: none">● Intel Management Engine Components● RDP Client● Citrix Client● VMware Client● Internet Explorer 9● Java● Flash● .Net Framework● Microsoft® Silverlight● Echo Agent● Ultra VNC● Adobe Reader● Intel Manageability Engine Firmware Recovery Agent - LeTOS only: <ul style="list-style-type: none">● xFreeRDP● Citrix ICA Client● VMware View Client● Java● Mozilla Firefox● NX NoMachine Client● X11 Client● VDI-In-A-Box Java Client● AnyConnect VPN Client Security <ul style="list-style-type: none">● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● <i>Chassis intrusion switch on selected model(s)</i> EPEAT™ Gold rating (WES models) ENERGY STAR® 5.2 (WES models) \ Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
DP dongle	None		
Flash Memory	8GB / DOM (Disk On Module) Card		
External optical	<i>Some:</i> Slim DVD burner box, SATA 1.5Gb/s, 12.7mm high, tray-in, via USB 2.0		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel H81 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 2.0 (optional external optical box or external I/O box occupies one specific USB 2.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 2.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Audio	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter		
Speaker	High Definition (HD) Audio, Realtek® ALC283 codec		
Ethernet	Internal speaker for business audio (1.5 watt)		
Intel AMT	Gigabit ethernet port, Intel I217-V, Wake on LAN®		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional System floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Mechanical	<ul style="list-style-type: none">● Tiny (1L), business black color; metal case● <i>M73 Tiny only:</i> 7.0" W X 7.2" D X 1.4" H 179mm W X 182mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration● <i>With VESA mount & optical box:</i> 7.2" W X 7.2" D X 2.55" H 184mm W X 182mm D X 65mm H 5.1lb (2.3 kg), weight may vary by configuration		
Limited Warranty	1-years - depot repair service / service upgrades available		

See footnotes for important warranty information
US model(s) announced February 25, 2013

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ThinkCentre M73 Tiny (10AY) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Preload	Ann date (mm/dd/yy)
10AY0005US	i5-4570T	4GBx1	128G SSD	DVD±RW	HD 4600	Intel 2230	USB	None	None	Mount	USB	Win7 Pro64 (DG)	10/01/13
10AY0006US	i7-4765T	4GBx1	128G SSD	DVD±RW	HD 4600	Intel 2230	USB	None	None	Mount	USB	Win7 Pro64 (DG)	10/01/13
10AY001RUS	i3-4130T	4GBx1	500G 7200	None	HD 4400	Intel 105	None	None	Stand	None	USB	Win7 Pro64 (DG)	10/01/13
10AY001SUS	i3-4130T	4GBx1	500G Hybrid	None	HD 4400	Intel 105	None	None	Stand	None	USB	Win7 Pro64 (DG)	10/01/13
10AY001TUS	G3220T	4GBx1	500G 7200	None	Intel HD	Intel 105	None	None	Stand	None	USB	Win7 Pro64 (DG)	10/01/13
10AY001UUS	G3220T	4GBx1	500G Hybrid	None	Intel HD	Intel 105	None	None	None	Mount	USB	Win7 Pro64 (DG)	10/01/13
10AY001VUS	i3-4130T	8GBx1	500G Hybrid	None	HD 4400	Intel 2230	None	None	None	Mount	USB	Win7 Pro64 (DG)	10/01/13
10AY001WUS	i3-4130T	4GBx1	500G 7200	DVD±RW	HD 4400	Intel 105	None	None	None	Mount	USB	Win7 Pro64 (DG)	10/01/13
10AY001XUS	i5-4570T	4GBx1	500G Hybrid	DVD±RW	HD 4600	Intel 105	USB	None	None	Mount	USB	Win7 Pro64 (DG)	10/22/13
10AY0004US	i5-4570T	4GBx1	500G Hybrid	DVD±RW	HD 4600	None	USB	None	None	Mount	USB	Win7 Pro64 (DG)	10/22/13
10AY0020US	i5-4570T	4GBx1	128G SSD	None	HD 4600	Intel 2230	None	None	Stand	None	USB	Win7 Pro64 (DG)	11/12/13
10AY001YUS	i5-4570T	4GBx1	500G Hybrid	None	HD 4600	Intel 2230	None	None	Stand	None	USB	Win7 Pro64 (DG)	11/12/13
10AY002SUS	G1820T	4GBx1	500G 7200	None	Intel HD	7260 ac	None	None	Stand	None	USB	Win7 P64 DG Win8.1	01/14/14
10AY003AUS	i5-4570T	4GBx1	128G SSD	None	HD 4600	Intel 6235	None	None	Stand	None	USB	Win7 Pro64 (DG)	02/11/14
Positioning	<i>Essential business features, exceptional value</i>										Preloaded operating system Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager		
Processor	Intel® Celeron® G1820T Processor (2 cores / 2 threads, 2.4GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Pentium® G3220T Processor (2 cores / 2 threads, 2.6GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130T Processor (2 cores / 4 threads, 2.9GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket												
Implementation	Processor in LGA1150 socket										Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Power Manager ● View Management Utility ● PC Device Stage ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Evernote® ● Microsoft® Office preloaded; purchase a product key to activate ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Nitro Pro		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook), <i>System automatically clocks down for processors with 1333MHz memory controller</i>												
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports up to dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz;</i> 1920x1200 (VGA)@60Hz (Reduced Blanking)												
DP dongle	None												
Disk	<i>Some: SATA 6.0Gb/s, 2.5" Wide, 7200 rpm</i> <i>Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide</i> <i>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide</i>												
External optical	<i>Some: Slim DVD burner box, SATA 1.5Gb/s, 12.7mm high, tray-in, via USB 2.0</i>												
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset												
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar												
eSATA port	None												
Chipset	Intel H81 Express Chipset												
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)												
Rear ports	Three USB 2.0 (optional external optical box or external I/O box occupies one specific USB 2.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial on selected models)												
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 2.0 port												
PCIe Mini Card	One PCI Express® Mini Card slot												
PCIe WLAN	<i>Some: 11ac/a/b/g/n wireless, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + BT combo adapter, 2x2</i> <i>Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2</i> <i>Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + BT combo adapter, 2x2</i> <i>Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1</i> <i>Some: Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter</i>										Security ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Individual USB port disablement ● Chassis intrusion switch on selected model(s)		
Bluetooth	High Definition (HD) Audio, Realtek® ALC283 codec												
Audio	Internal speaker for business audio (1.5 watt)												
Speaker	Gigabit ethernet port, Intel I217-V, Wake on LAN®												
Ethernet	None												
Intel AMT	None												
Security chip	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo												
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo												
Floor Stand	Optional System floor stand for vertical orientation												
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard												
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU												
Mechanical	● Tiny (1L), business black color; metal case ● <i>M73 Tiny only:</i> 7.0" W X 7.2" D X 1.4" H 179mm W X 182mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration ● <i>With VESA mount & optical box:</i> 7.2" W X 7.2" D X 2.55" H 184mm W X 182mm D X 65mm H 5.1lb (2.3 kg), weight may vary by configuration										EPEAT™ Gold rating ENERGY STAR® 5.2-compliant Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information

US model(s) announced Oct 1, Oct 22, or Nov 12, 2013 or Jan 14 or Feb 11, 2014

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(MLM1N-1) February 2014

ThinkCentre M73 Tiny (10AY) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Preload	Ann date (mm/dd/yy)
10AY003JUS	G3220T	4GBx1	500G 7200	None	Intel HD	BCM4352	Serial	None	Stand	None	USB	Win7 P64 DG Win8.1	04/01/14
10AY003KUS	i5-4570T	4GBx1	500G 7200	None	HD 4600	N7260	Serial	None	Stand	None	USB	Win7 P64 DG Win8.1	04/01/14
10AY003HUS	i3-4130T	4GBx1	500G 7200	None	HD 4400	N7260	Serial	None	Stand	None	USB	Win7 P64 DG Win8.1	04/01/14

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	Essential business features, exceptional value		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Power Manager● View Management Utility● PC Device Stage● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Evernote®● Microsoft® Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Nitro Pro
Processor	Intel® Pentium® G3220T Processor (2 cores / 2 threads, 2.6GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130T Processor (2 cores / 4 threads, 2.9GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Implementation			
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook), <i>System automatically clocks down for processors with 1333MHz memory controller</i>		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports up to dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i>		
DP dongle	None		
Disk	<i>Some:</i> SATA 6.0Gb/s, 2.5" Wide, 7200 rpm		
External optical	None		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel H81 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 2.0 (optional external optical box or external I/O box occupies one specific USB 2.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 2.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11ac/b/g/n wireless, PCIe Half Mini Card, Broadcom BCM4352, dual band (2.4/5GHz), Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Audio	High Definition (HD) Audio, Realtek® ALC283 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
Ethernet	Gigabit ethernet port, Intel I217-V, Wake on LAN®		
Intel AMT	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional System floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Mechanical	<ul style="list-style-type: none">● Tiny (1L), business black color; metal case● <i>M73 Tiny only:</i> 7.0" W X 7.2" D X 1.4" H 179mm W X 182mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration● <i>With VESA mount & optical box:</i> 7.2" W X 7.2" D X 2.55" H 184mm W X 182mm D X 65mm H 5.1lb (2.3 kg), weight may vary by configuration		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced April 1, 2014

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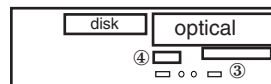
ThinkCentre M73 Small (10B6) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	Floor stand	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10B60008US	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10B60009US	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10B6000AUS	3x4	G3220	2GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10B6000BUS	3x4	G3220	4GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10B6000FUS	3x4	i3-4130	8GBx1	1TB 7200	DVD±RW	N105	None	GT620	None	Serial	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10B6000GUS	3x4	G3220	4GBx1	500G Hybrid	DVD±RW	N105	None	Intel HD	None	Serial	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10B6000PUS	3x4	i5-4570	4GBx1	128G SSD	DVD±RW	None	None	HD 4600	None	None	Stand	None	None	Win7 Pro64 (DG)	11/12/13
10B6000QUS	3x4	i7-4770	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	Stand	None	None	Win7 Pro64 (DG)	11/12/13
10B6000RUS	3x4	i7-4770	4GBx1	500G Hybrid	DVD±RW	None	None	HD 4600	None	None	Stand	None	None	Win7 Pro64 (DG)	11/12/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	<i>Essential business features, exceptional value</i>											Preloaded operating system			
Processor	Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none"> • Rescue and Recovery™ • Password Manager 			
Implementation	Processor in LGA1150 socket											Preloaded applications (only some listed)			
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller											<ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Power Manager • View Management Utility • PC Device Stage • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Evernote® • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Nitro Pro 			
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz;</i> 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some: NVIDIA® Geforce® GT 620, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts;</i> <i>Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz</i>														
Disk	<i>Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm</i> <i>Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide</i> <i>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide</i>														
Optical	<i>Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</i>														
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset														
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar														
eSATA port	None														
Media reader	Optional 9-in-1 media reader, internal USB 2.0														
Chipset	Intel H81 Express Chipset														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
PCIe WLAN [†]	<i>Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1</i>														
Bluetooth	None														
Speaker	Internal speaker for business audio (1 watt) (*No internal speaker for 10B6000PUS)														
IEEE 1394	None														
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®														
Manageability	Intel Standard Manageability														
Modem	None														
Security chip	None														
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Floor Stand	Optional system floor stand for vertical orientation														
Power supply	240 watts, autosensing, active PFC														
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 101mm H • 14.6 lb (6.6 kg) in maximum configuration • Highlighted optical drive button for easy access 														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 2.5", N/A, no access, opt 2nd SSD* Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed														
Slot	Slot 1: Low Profile, PCIe 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1														
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														



- Security**
- One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
 - Power-on password
 - Administrator password
 - Hard disk password
 - Boot sequence control
 - Boot without keyboard and mouse
 - Serial port I/O control
 - Individual USB port disablement
 - Chassis intrusion switch on selected model(s)

Cisco EnergyWise compatible
GREENGUARD® certified
RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to TC-AQP sheet;
For Lenovo service upgrade options, please go to S-TC sheet

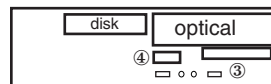
ThinkCentre M73 Small (10B6) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCle WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	Floor stand	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10B6000XUS	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	None	None	Stand	None	None	Win7 P64 DG Win8.1	02/04/14
10B6000YUS	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	None	None	Stand	None	None	Win7 P64 DG Win8.1	02/04/14
10B60011US	3x4	G1820	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	None	None	Stand	None	None	Win7 P64 DG Win8.1	02/04/14
10B60013US	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	Stand	None	None	Win7 P64 DG Win8.1	02/11/14
10B60012US	3x4	G3220	2GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	None	Stand	None	None	Win7 P64 DG Win8.1	02/11/14
10B60014US	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	Stand	None	None	Win7 P64 DG Win8.1	02/11/14
10B60015US	3x4	i5-4570	4GBx1	128G SSD	DVD±RW	None	None	HD 4600	None	None	Stand	None	None	Win7 P64 DG Win8.1	03/25/14

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	<i>Essential business features, exceptional value</i>										Preloaded operating system				
Processor	Intel® Celeron® G1820 Processor (2 cores / 2 threads, 2.7GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket										Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Power Manager • View Management Utility • PC Device Stage • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Evernote® • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Nitro Pro				
Implementation	Processor in LGA1150 socket														
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller														
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz;</i> 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some: AMD Radeon™ HD 7450, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts;</i> <i>Max resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz</i>														
Disk	<i>Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm</i> <i>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide</i> <i>Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</i>														
Optical	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset														
SATA controller	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar														
Onboard SATA	None														
eSATA port	Optional 9-in-1 media reader, internal USB 2.0														
Media reader															
Chipset	Intel H81 Express Chipset														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
PCle WLAN ⁴	<i>Some: 11b/g/n wireless, PCle Half Mini Card, Intel Centrino® Wireless-N 105, 1x1</i>														
Bluetooth	None														
Speaker	Internal speaker for business audio (1 watt)														
IEEE 1394	None														
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®														
Manageability	Intel Standard Manageability														
Modem	None														
Security chip	None														
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Floor Stand	Optional system floor stand for vertical orientation														
Power supply	240 watts, autosensing, active PFC														
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 101mm H • 14.6 lb (6.6 kg) in maximum configuration • Highlighted optical drive button for easy access 														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 2.5", N/A, no access, opt 2nd SSD* Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed														
Slot	Slot 1: Low Profile, PCle 3.0 x16 (40w max) Slot 2: Low Profile, PCle 2.0 x1 Slot 3: Low Profile, PCle 2.0 x1														
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														




ThinkCentre M73 Small (10B5) - ES 5.2 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ^a	SATA disk GB rpm	SATA optical	PCle WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	Floor stand	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10B50001US	3x4	i5-4570	4GBx2	500G Hybrid	DVD±RW	N2230	None	GT 620	None	S P	None	ES5.2	None	Win7 Pro64 (DG)	10/01/13
10B5000MUS	3x4	G1820	4GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	None	Floor	ES5.2	None	Win7 P64 DG	01/14/14

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	<i>Essential business features, exceptional value</i>											Preloaded operating system			
Processor	Intel® Celeron® G1820 Processor (2 cores / 2 threads, 2.7GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											<i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit			
Implementation	Processor in LGA1150 socket											Ready to install applications (only some listed)			
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller											<ul style="list-style-type: none"> • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Power Manager • View Management Utility • PC Device Stage • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Evernote® • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Nitro Pro 			
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> NVIDIA® GeForce® GT 620 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz														
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide														
Optical	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset														
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar														
eSATA port	None														
Media reader	Optional 9-in-1 media reader, internal USB 2.0														
Chipset	Intel H81 Express Chipset														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
PCle WLAN ⁴	<i>Some:</i> 11b/g/n wireless, PCle Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2														
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter														
Speaker	Internal speaker for business audio (1 watt)														
IEEE 1394	None														
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®														
Manageability	Intel Standard Manageability														
Modem	None														
Security chip	None														
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Floor Stand	Optional system floor stand for vertical orientation														
Power supply	<i>Some:</i> 240 watts, autosensing, active PFC, 85% PSU														
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 101mm H • 14.6 lb (6.6 kg) in maximum configuration • Highlighted optical drive button for easy access 														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 2.5", N/A, no access, opt 2nd SSD* Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed														
Slot	Slot 1: Low Profile, PCle 3.0 x16 (40w max) Slot 2: Low Profile, PCle 2.0 x1 Slot 3: Low Profile, PCle 2.0 x1														
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											EPEAT™ Gold rating ENERGY STAR® 5.2-compliant Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet			

See footnotes for important warranty information

US model(s) announced October 1, 2013 or January 14, 2014

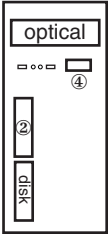
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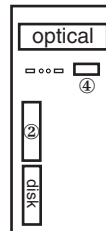
(MLM1S-2) January 14, 2014

ThinkCentre M73 Mini Tower (10B0) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10B00005US	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	None	None	Win7 P64 DG Win8	10/01/13
10B00006US	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	None	None	Win7 P64 DG Win8	10/01/13
10B00007US	3x4	G3220	4GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	S P	None	None	Win7 P64 DG Win8	10/01/13
10B00008US	3x4	i7-4770	8GBx1	1TB 7200	DVD±RW	None	None	HD 4600	None	S P	None	None	Win7 P64 DG Win8	10/01/13
10B0000GUS	3x4	i5-4570	4GBx1	1TB 7200	DVD±RW	None	None	HD 4600	None	None	None	None	Win7 P64 DG Win8	10/22/13
10B0000HUS	3x4	i5-4570	4GBx1	128G SSD	DVD±RW	None	None	HD 4600	None	None	None	None	Win7 P64 DG Win8	11/12/13
10B0000JUS	3x4	i5-4570	4GBx1	1TB Hybrid	DVD±RW	None	None	HD 4600	None	None	None	None	Win7 P64 DG Win8	11/12/13
10B0000KUS	3x4	i3-4130	4GBx1	2 x 500G 7200	DVD±RW	None	None	HD 7450	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10B0000LUS	3x4	i5-4570	4GBx1	2 x 500G 7200	DVD±RW	None	None	HD 7450	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10B0000NUS	3x4	G3220	4GBx1	2 x 500G 7200	DVD±RW	None	None	HD 7450	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10B0000QUS	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	None	None	Win7 P64 DG Win8.1	02/11/14
10B0000RUS	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	None	None	Win7 P64 DG Win8.1	02/11/14

Positioning Processor	<i>Essential business features, exceptional value</i> Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit	
Implementation	Processor in LGA1150 socket		Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager	
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller		Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• ThinkVantage Power Manager• View Management Utility• PC Device Stage• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Evernote®• Microsoft® Office preloaded; purchase a product key to activate• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Nitro Pro	
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> AMD Radeon™ HD 7450 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express® 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz			
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 1TB (7200 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 3.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
Optical	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA controller	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar			
Onboard SATA	None			
eSATA port	Optional 9-in-1 media reader, internal USB 2.0			
Media reader				
Chipset	Intel H81 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
PCIe WLAN ⁴	None			
Bluetooth	None			
Speaker	Internal speaker for business audio (1.5 watt)			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®			
Manageability	Intel Standard Manageability			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	280 watts, manual switch, passive PFC			
Mechanical	<ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H (with handle)• 160mm W X 422mm D X 388mm H• 20.7 lb (9.4 kg) in maximum configuration• Handle on top front• Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, opt disk* Bay 3: 3.5", 1" high, no access, std disk Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed			
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• Chassis intrusion switch on selected model(s)	
			Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant	
			Supports ThinkVantage Technologies	
			For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	



See footnotes for important warranty information

US model(s) announced October 1 or 22, November 12, 2013, or February 4 or 11, 2014

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(MLM1T-1) February 2014

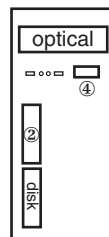
ThinkCentre M73 Mini Tower (10B2) - ES 5.2 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10B20002US	3x4	i5-4670	4GBx2	500G Hybrid	DVD±RW	N2230	None	GT 620	None	S P	ES5.2	None	Win7 Pro64 (DG)	10/01/13
10B2000QUS	3x4	G1820	4GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	None	ES5.2	None	Win7 P64 DG Win8.1	01/14/14

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	Essential business features, exceptional value		Preloaded operating system
Processor	Intel® Celeron® G1820 Processor (2 cores / 2 threads, 2.7GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: NVIDIA® Geforce® GT 620 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz		Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Power Manager ● View Management Utility ● PC Device Stage ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Evernote® ● Microsoft® Office preloaded; purchase a product key to activate ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Nitro Pro
Disk	Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide		
Optical	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		Security ● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement ● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar		
eSATA port	None		
Media reader	Optional 9-in-1 media reader, internal USB 2.0		
Chipset	Intel H81 Express Chipset		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
PCle WLAN ⁴	Some: 11b/g/n wireless, PCle Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Some: Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®		
Manageability	Intel Standard Manageability		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	Some: 280 watts, autosensing, active PFC, 85% PSU		
Mechanical	● Business black color; metal case ● 6.3" W X 16.6" D X 15.3" H (with handle) ● 160mm W X 422mm D X 388mm H ● 20.7 lb (9.4 kg) in maximum configuration ● Handle on top front ● Highlighted optical drive button for easy access		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, opt disk* Bay 3: 3.5", 1" high, no access, std disk Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed		
Slot	Slot 1: half-length, full-height, PCle 3.0 x16 (60w max) Slot 2: half-length, full-height, PCle 2.0 x1 Slot 3: half-length, full-height, PCle 2.0 x1		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		



See footnotes for important warranty information
US model(s) announced October 1, 2013 or January 14, 2014

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ThinkCentre M73 Tiny (10AX) - Thin Client

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Flash Memory	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Preload	Ann date (mm/dd/yy)
10AX005GUS	G1820T	2GBx1	8G DOM Card	None	Intel HD	Intel 105	None	None	Stand	None	USB	WES 7	02/25/14
10AX005HUS	G1820T	2GBx1	8G DOM Card	None	Intel HD	Intel 105	None	None	Stand	None	USB	LeTOS	02/25/14

- 1-year depot warranty

Positioning	Essential business features, exceptional value		Preloaded operating system <i>Some:</i> Genuine Windows® Embedded Standard 7 (WES 7) <i>Some:</i> LeTOS (Lenovo Terminal Operating System, Linux-based) Preloaded applications (only some listed) - WES 7 only: <ul style="list-style-type: none">● Intel Management Engine Components● RDP Client● Citrix Client● VMware Client● Internet Explorer 9● Java● Flash● .Net Framework● Microsoft® Silverlight● Echo Agent● Ultra VNC● Adobe Reader● Intel Manageability Engine Firmware Recovery Agent - LeTOS only: <ul style="list-style-type: none">● xFreeRDP● Citrix ICA Client● VMware View Client● Java● Mozilla Firefox● NX NoMachine Client● X11 Client● VDI-In-A-Box Java Client● AnyConnect VPN Client Security <ul style="list-style-type: none">● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating (WES models) ENERGY STAR® 5.2 (WES models) Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Processor	Intel® Celeron® G1820T Processor (2 cores / 2 threads, 2.4GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller		
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook), <i>System automatically clocks down for processors with 1333MHz DDR3 memory controller</i>		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports up to dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i>		
DP dongle	None		
Flash Memory	8GB / DOM (Disk On Module) Card		
External optical	<i>Some:</i> Slim DVD burner box, SATA 1.5Gb/s, 12.7mm high, tray-in, via USB 2.0		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel H81 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 2.0 (optional external optical box or external I/O box occupies one specific USB 2.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 2.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter		
Bluetooth	High Definition (HD) Audio, Realtek® ALC283 codec		
Audio	Internal speaker for business audio (1.5 watt)		
Speaker	Gigabit ethernet port, Intel I217-V, Wake on LAN®		
Ethernet	None		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional System floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Mechanical	<ul style="list-style-type: none">● Tiny (1L), business black color; metal case● <i>M73 Tiny only:</i> 7.0" W X 7.2" D X 1.4" H 179mm W X 182mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration● <i>With VESA mount & optical box:</i> 7.2" W X 7.2" D X 2.55" H 184mm W X 182mm D X 65mm H 5.1lb (2.3 kg), weight may vary by configuration		
Limited Warranty	1-years - depot repair service / service upgrades available		

See footnotes for important warranty information
US model(s) announced February 25, 2013

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ThinkCentre M73 Tiny (10AX)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Preload	Ann date (mm/dd/yy)
10AX001WUS	i5-4570T	4GBx1	500G 7200	DVD±RW	HD 4600	Intel 105	None	None	None	Mount	USB	Win7 P64 DG Win8	10/01/13
10AX001XUS	i5-4570T	4GBx1	500G Hybrid	DVD±RW	HD 4600	Intel 2230	None	None	None	Mount	USB	Win7 P64 DG Win8	10/01/13
10AX001YUS	i7-4765T	8GBx1	500G Hybrid	DVD±RW	HD 4600	Intel 2230	None	None	None	Mount	USB	Win7 P64 DG Win8	10/01/13
10AX003WUS	i3-4130T	4GBx1	500G 7200	None	HD 4400	Intel 105	None	None	Stand	None	USB	Win7 P64 DG Win8	10/01/13
10AX003YUS	i3-4130T	4GBx1	500G 7200	DVD±RW	HD 4400	Intel 105	None	None	None	Mount	USB	Win7 P64 DG Win8	10/01/13
10AX0040US	G3220T	4GBx1	500G 7200	DVD±RW	Intel HD	Intel 105	None	None	None	Mount	USB	Win7 P64 DG Win8	10/01/13
10AX0041US	G3220T	4GBx1	500G 7200	None	Intel HD	Intel 105	None	None	Stand	None	USB	Win7 P64 DG Win8	10/01/13
10AX0042US	i3-4130T	4GBx1	500G Hybrid	None	HD 4400	Intel 2230	None	None	Stand	None	USB	Win7 P64 DG Win8	10/01/13
10AX0067US	i5-4570T	4GBx1	500G 7200	None	HD 4600	N7260	Serial	None	Stand	None	USB	Win7 P64 DG Win8.1	04/01/14
10AX0065US	G1820T	4GBx1	500G 7200	None	Intel HD	BCM4352	Serial	None	Stand	None	USB	Win7 P64 DG Win8.1	04/01/14
10AX0066US	i3-4130T	4GBx1	500G 7200	None	HD 4400	N7260	Serial	None	Stand	None	USB	Win7 P64 DG Win8.1	04/01/14
Positioning Processor	<i>Essential business features, exceptional value</i> Intel® Celeron® G1820T Processor (2 cores / 2 threads, 2.4GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Pentium® G3220T Processor (2 cores / 2 threads, 2.6GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130T Processor (2 cores / 4 threads, 2.9GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket										Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager		
Implementation	Processor in LGA1150 socket										Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Power Manager ● View Management Utility ● PC Device Stage ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Evernote® ● Microsoft® Office preloaded; purchase a product key to activate ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Nitro Pro		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook), <i>System automatically clocks down for processors with 1333MHz DDR3 memory controller</i>												
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports up to dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)</i>												
DP dongle	None												
Disk	<i>Some:</i> SATA 6.0Gb/s, 2.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide												
External optical	<i>Some:</i> Slim DVD burner box, SATA 1.5Gb/s, 12.7mm high, tray-in, via USB 2.0												
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset												
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar												
eSATA port	None												
Chipset	Intel H81 Express Chipset												
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)												
Rear ports	Three USB 2.0 (optional external optical box or external I/O box occupies one specific USB 2.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial on selected models)												
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 2.0 port												
PCIe Mini Card	One PCI Express® Mini Card slot												
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11ac/b/g/n wireless, PCIe Half Mini Card, Broadcom BCM4352, dual band (2.4/5GHz), Wi-Fi + Bluetooth 4.0 combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter												
Bluetooth	High Definition (HD) Audio, Realtek® ALC283 codec												
Audio	Internal speaker for business audio (1.5 watt)												
Speaker	Gigabit ethernet port, Intel I217-V, Wake on LAN®												
Ethernet	None												
Intel AMT	None												
Modem	None												
Security chip	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo												
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo												
Floor Stand	Optional System floor stand for vertical orientation												
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard												
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU												
Mechanical	● Tiny (1L), business black color; metal case ● M73 Tiny only: 7.0" W X 7.2" D X 1.4" H 179mm W X 182mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration ● With VESA mount & optical box: 7.2" W X 7.2" D X 2.55" H 184mm W X 182mm D X 65mm H 5.1lb (2.3 kg), weight may vary by configuration												
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available												

ThinkCentre M73 Tiny (10AX) - 1-year depot

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Preload	Ann date (mm/dd/yy)
10AX003XUS	i3-4130T	4GBx1	500G 7200	None	HD 4400	Intel 105	None	None	Stand	None	USB Win7 Pro64 (DG)		10/01/13
10AX0057US	G1820T	4GBx1	500G 7200	None	Intel HD	N7260	None	None	Stand	None	USB Win7 P64 DG Win8.1		01/14/14

●A depot repair service 1-year limited warranty

Positioning Processor	Essential business features, exceptional value Intel® Celeron® G1820T Processor (2 cores / 2 threads, 2.4GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130T Processor (2 cores / 4 threads, 2.9GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Power Manager● View Management Utility● PC Device Stage● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Evernote®● Microsoft® Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Nitro Pro
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook), <i>System automatically clocks down for processors with 1333MHz DDR3 memory controller</i>		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports up to dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)		
DP dongle	None		
Disk	<i>Some:</i> SATA 6.0Gb/s, 2.5" Wide, 7200 rpm		
External optical	None		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel H81 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 2.0 (optional external optical box or external I/O box occupies one specific USB 2.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 2.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Bluetooth	High Definition (HD) Audio, Realtek® ALC283 codec		
Audio	Internal speaker for business audio (1.5 watt)		
Speaker	Gigabit ethernet port, Intel I217-V, Wake on LAN®		
Ethernet	None		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional System floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Mechanical	<ul style="list-style-type: none">● Tiny (1L), business black color; metal case● M73 Tiny only: 7.0" W X 7.2" D X 1.4" H 179mm W X 182mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration● With VESA mount & optical box: 7.2" W X 7.2" D X 2.55" H 184mm W X 182mm D X 65mm H 5.1lb (2.3 kg), weight may vary by configuration		
Limited Warranty	1-years - depot repair service / service upgrades available		

See footnotes for important warranty information

US model(s) announced October 1, 2013 or January 14, 2014

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(MLM1N-3) January 2014

ThinkCentre M73 Tiny (10AX) - GMP

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AX002UUS	G3420T	2GBx1	320G 5400	None	Intel HD	Intel 105	None	None	Stand	None	G P	Win7 Pro64	10/01/13
10AX002VUS	i3-4130T	4GBx1	500G 5400	None	HD 4400	Intel 2230	None	None	Stand	None	G P	Win7 Pro64 (DG)	10/01/13
10AX003DUS	i5-4570T	4GBx1	128G SSD	DVD±RW	HD 4600	Intel 2230	USB	Switch	None	Mount	G P	Win7 Pro64 (DG)	10/01/13
10AX0044US	i5-4570T	4GBx1	500G 7200	None	HD 4600	Intel 2230	None	None	Stand	None	G P	Win7 Pro64 (DG)	10/22/13
10AX0045US	i3-4130T	4GBx1	500G 7200	None	HD 4400	Intel 105	None	None	Stand	None	G P	Win7 Pro64 (DG)	10/22/13

•Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	<i>Essential business features, exceptional value</i> Intel® Pentium® G3420T Processor (2 cores / 2 threads, 2.7GHz, 3MB cache), Intel HD Graphics, 1600MHz DDR3 memory controller Intel Core™ i3-4130T Processor (2 cores / 4 threads, 2.9GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket										Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Power Manager • View Management Utility • PC Device Stage • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Evernote® • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Nitro Pro			
Implementation														
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook), System automatically clocks down for processors with 1333MHz DDR3 memory controller													
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports up to dual independent display; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)													
DP dongle	None													
Disk	<i>Some:</i> SATA 3.0Gb/s, 2.5" Wide, 5400 rpm or 7200 rpm <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide <i>Some:</i> Slim DVD burner box, SATA 1.5Gb/s, 12.7mm high, tray-in, via USB 2.0 Serial ATA, SATA 6.0Gb/s support, integrated in chipset One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar eSATA port None													
Chipset	Intel H81 Express Chipset													
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)													
Rear ports	Three USB 2.0 (optional external optical box or external I/O box occupies one specific USB 2.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial on selected models)													
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 2.0 port													
PCIe Mini Card	One PCI Express® Mini Card slot													
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter													
Bluetooth	High Definition (HD) Audio, Realtek® ALC283 codec													
Audio	Internal speaker for business audio (1.5 watt)													
Speaker	Gigabit ethernet port, Intel I217-V, Wake on LAN®													
Ethernet	None													
Intel AMT	None													
Modem	None													
Security chip	None													
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo													
Floor Stand	Optional System floor stand for vertical orientation													
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard													
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU													
Mechanical	• Tiny (1L), business black color; metal case • M73 Tiny only: 7.0" W X 7.2" D X 1.4" H 179mm W X 182mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration • With VESA mount & optical box: 7.2" W X 7.2" D X 2.55" H 184mm W X 182mm D X 65mm H 5.1lb (2.3 kg), weight may vary by configuration										Security • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Individual USB port disablement • Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available													

See footnotes for important warranty information

US model(s) announced October 1, 2013 or October 22, 2013

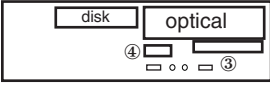
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(MLM1N-4) October 2013

ThinkCentre M73 Small (10B7)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	Floor stand	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10B7000SUS	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7000TUS	3x4	i7-4770	8GBx1	500G Hybrid	DVD±RW	N2230	None	GT 620	None	None	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7001RUS	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7001TUS	3x4	i3-4130	4GBx1	500G Hybrid	DVD±RW	None	None	HD 4400	None	None	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7001UUS	3x4	i3-4130	4GBx1	1TB 7200	DVD±RW	None	None	HD 4400	None	Serial	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7001VUS	3x4	G3220	4GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	Serial	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7001WUS	3x4	G3220	4GBx1	500G Hybrid	DVD±RW	None	None	Intel HD	None	Serial	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7001XUS	3x4	G3220	4GBx1	1TB 7200	DVD±RW	None	None	Intel HD	None	Serial	Stand	None	None	Win7 P64 DG Win8	10/01/13
10B7004XUS	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	None	None	Stand	None	None	Win7 P64 DG Win8.1	02/04/14

Positioning Processor	Essential business features, exceptional value Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit				
Implementation	Processor in LGA1150 socket											Ready to install applications (only some listed) <ul style="list-style-type: none"> Rescue and Recovery™ Password Manager 				
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets											Preloaded applications (only some listed) <ul style="list-style-type: none"> ThinkVantage® Product Recovery ThinkVantage System Update ThinkVantage Communication Utility ThinkVantage Power Manager View Management Utility PC Device Stage Lenovo Cloud Storage by SugarSync Lenovo Solution Center Lenovo Message Center Plus Norton™ Internet Security (30 days of virus definitions) Adobe® Reader® Skype™ Evernote® Microsoft® Office preloaded; purchase a product key to activate Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) Nitro Pro 				
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> NVIDIA® GeForce® GT 620 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> AMD Radeon™ HD 7450 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz															
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide															
Optical	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset															
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar															
eSATA port	None															
Media reader	Optional 9-in-1 media reader, internal USB 2.0															
Chipset	Intel H81 Express Chipset															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Realtek® ALC662 codec															
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2															
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter															
Speaker	Internal speaker for business audio (1 watt)															
IEEE 1394	None															
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®															
Manageability	Intel Standard Manageability															
Modem	None															
Security chip	None															
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo															
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo															
Floor Stand	Optional system floor stand for vertical orientation															
Power supply	<i>Some:</i> 240 watts, autosensing, active PFC															
Machine	<ul style="list-style-type: none"> Business black color; metal case 13.2" W X 15.0" D X 3.9" H 335mm W X 382mm D X 101mm H 14.6 lb (6.6 kg) in maximum configuration Highlighted optical drive button for easy access 															
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 2.5", N/A, no access, opt 2nd SSD* Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed															
Slot	Slot 1: Low Profile, PCIe 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1															
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											Security <ul style="list-style-type: none"> One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) Power-on password Administrator password Hard disk password Boot sequence control Boot without keyboard and mouse Serial port I/O control Individual USB port disablement Chassis intrusion switch on selected model(s) Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information
 US model(s) announced October 1, 2013 or February 4, 2014


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 (MLM1S-3) February 2014

ThinkCentre M73 Small (10B4) - ES 5.2

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	Floor stand	ENERGY STAR 5.2 Global	Preload	Ann date (mm/dd/yy)
10B4000XUS	3x4	i7-4770	8GBx1	500G Hybrid DVD±RW	N2230	None	GT 620	None	S P	Stand	ES5.2	None	Win7 Pro64 (DG)	10/01/13

●3-year limited warranty

Positioning Processor	Essential business features, exceptional value Intel® Core™ i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Power Manager● View Management Utility● PC Device Stage● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Evernote®● Microsoft® Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Nitro Pro
Implementation	Processor in LGA1150 socket		
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i> <i>Some: NVIDIA® GeForce® GT 620, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz</i>		
Disk	<i>Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide</i>		
Optical	<i>Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</i>		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar		
eSATA port	None		
Media reader	Optional 9-in-1 media reader, internal USB 2.0		
Chipset	Intel H81 Express Chipset		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
PCIe WLAN ⁴	<i>Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2</i>		
Bluetooth	<i>Some: Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter</i>		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®		
Manageability	Intel Standard Manageability		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
Power supply	<i>Some: 240 watts, autosensing, active PFC, 85% PSU</i>		
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.2" W X 15.0" D X 3.9" H● 335mm W X 382mm D X 101mm H● 14.6 lb (6.6 kg) in maximum configuration● Highlighted optical drive button for easy access		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 2.5", N/A, no access, opt 2nd SSD* Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed		
Slot	Slot 1: Low Profile, PCIe 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1		
			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced October 1, 2013

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(MLM1S-4) October 2013

Product Specifications Reference (PSREF)

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

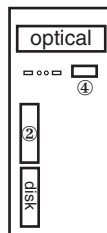
(MLM1S-5) February 2014

ThinkCentre M73 Mini Tower (10B3)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCle WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10B3000CUS	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	None	None	Win7 P64 DG Win8	10/01/13
10B3000DUS	3x4	i7-4770	8GBx1	500G Hybrid	DVD±RW	None	None	GT 620	None	None	None	None	Win7 P64 DG Win8	10/01/13
10B3000RUS	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	None	None	Win7 P64 DG Win8	10/01/13
10B3000SUS	3x4	i3-4130	4GBx1	500G Hybrid	DVD±RW	None	None	HD 4400	None	Serial	None	None	Win7 P64 DG Win8	10/01/13
10B3000TUS	3x4	i3-4130	4GBx1	1TB 7200	DVD±RW	None	None	HD 4400	None	Serial	None	None	Win7 P64 DG Win8	10/01/13
10B3000VUS	3x4	G3220	4GBx1	1TB 7200	DVD±RW	None	None	Intel HD	None	Serial	None	None	Win7 P64 DG Win8	10/01/13
10B3000WUS	3x4	G3220	4GBx1	500G Hybrid	DVD±RW	None	None	Intel HD	None	None	None	None	Win7 P64 DG Win8	10/01/13
10B3000XUS	3x4	G3220	4GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	None	None	None	Win7 P64 DG Win8	10/01/13
10B3002BUS	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10B3002CUS	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	None	None	None	None	Win7 P64 DG Win8.1	02/04/14

Positioning Processor	Essential business features, exceptional value Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none"> • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Power Manager • View Management Utility • PC Device Stage • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Evernote® • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Nitro Pro 		
Implementation Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller													
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> NVIDIA® GeForce® GT 620 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> AMD Radeon™ HD 7450 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz													
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide													
Optical	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset													
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar													
eSATA port	None													
Media reader	Optional 9-in-1 media reader, internal USB 2.0													
Chipset	Intel H81 Express Chipset													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
PCle WLAN ⁴	None													
Bluetooth	None													
Speaker	Internal speaker for business audio (1.5 watt)													
IEEE 1394	None													
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®													
Manageability	Intel Standard Manageability													
Modem	None													
Security chip	None													
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo													
Power supply	<i>Some:</i> 280 watts, manual switch, passive PFC													
Mechanical	<ul style="list-style-type: none"> • Business black color; metal case • 6.3" W X 16.6" D X 15.3" H (with handle) • 160mm W X 422mm D X 388mm H • 20.7 lb (9.4 kg) in maximum configuration • Handle on top front • Highlighted optical drive button for easy access 													
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, opt disk* Bay 3: 3.5", 1" high, no access, std disk Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed													
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1													
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available													



- Security**
- One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
 - Power-on password
 - Administrator password
 - Hard disk password
 - Boot sequence control
 - Boot without keyboard and mouse
 - Serial port I/O control
 - Individual USB port disablement
 - Chassis intrusion switch on selected model(s)

Cisco EnergyWise compatible
 GREENGUARD® certified
 RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to TC-AQP sheet;
 For Lenovo service upgrade options, please go to S-TC sheet

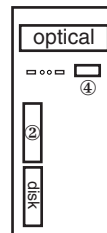
ThinkCentre M73 Mini Tower (10B1) - ES 5.2 (GMP)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	2nd Serial / Parallel	ENERGY STAR 5.2	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10B10011US	3x4	G3420	2GBx1	500G 7200	DVD	None	None	Intel HD	None	None	ES5.2	G P	Win7 Pro64	10/01/13
10B10012US	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	ES5.2	G P	Win7 Pro64 (DG)	10/01/13
10B10017US	3x4	i5-4570	4GBx1	1TB 7200	DVD±RW	N105	Media	HD 8470	Switch	None	ES5.2	G P	Win7 Pro64 (DG)	10/01/13
10B1001KUS	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	None	None	ES5.2	G P	Win7 Pro64	02/04/14

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	Essential business features, exceptional value Intel® Pentium® G3420 Processor (2 cores / 2 threads , 3.2GHz, 3MB cache), Intel HD Graphics, 1600MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads , 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads , 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket			Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit		
Implementation	Processor in LGA1150 socket			Ready to install applications (only some listed)		
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller			<ul style="list-style-type: none">• Rescue and Recovery™• Password Manager		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display, works along with discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz			Preloaded applications (only some listed)		
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm			<ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• ThinkVantage Power Manager• View Management Utility• PC Device Stage• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Evernote®• Microsoft® Office preloaded; purchase a product key to activate• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Nitro Pro		
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive					
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset					
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar					
eSATA port	None					
Media reader	Optional 9-in-1 media reader, internal USB 2.0					
Chipset	Intel H81 Express Chipset					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)					
Rear ports	Two USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec					
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1					
Bluetooth	None					
Speaker	Internal speaker for business audio (1.5 watt)					
IEEE 1394	None					
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®					
Manageability	Intel Standard Manageability					
Modem	None					
Security chip	None					
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo					
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo					
Power supply	<i>Some:</i> 280 watts, autosensing, active PFC, 85% PSU					
Mechanical	<ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H (with handle)• 160mm W X 422mm D X 388mm H• 20.7 lb (9.4 kg) in maximum configuration• Handle on top front• Highlighted optical drive button for easy access					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, opt disk* Bay 3: 3.5", 1" high, no access, std disk Bay 4: 1.5", .35" high, access, opt reader* *bay only available on models with HDD/SSD/reader installed					
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1					
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available					



See footnotes for important warranty information

US model(s) announced October 1, 2013 or February 4, 2014

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(MLM1T-4) February 2014



Lenovo ThinkCentre M72z with Frame Stand



Lenovo ThinkCentre M72z with Frame Stand



Lenovo ThinkCentre M72z with Monitor Stand



Lenovo ThinkCentre M72z with Monitor Stand



Dual Independent Display with Optional Lenovo ThinkVision Monitor

ThinkCentre M72z (3543) - TopSeller (Win 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁸	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/Mouse Global	Preload	Ann date (mm/dd/yy)
3543-B6U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	Intel 105	Media	None	None	None	Frame	USB	None	Win7 Pro64 03/12/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Mainstream All-In-One PC for the enterprise		Preloaded operating system ²⁰ Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
Processor	Intel® Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		
Implementation	Processor in LGA1155 socket		Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager● Business-in-a-Box
Memory	16GB max, PC3-12800 1600MHz DDR3, two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 2500 in processor, uses main memory, external digital monitor support via DisplayPort™, supports dual independent display; Maximum resolution: 2560x1600 (DisplayPort) @60Hz		Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Automatic Lock Utility● ThinkVantage Power Manager● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● RapidBoot HDD Accelerator● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● InterVideo WinDVD® (DVD, DVD±RW)
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	Hard Disk Drive / SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Media reader	7-in-1 Single Slot SD media reader		
Chipset	Intel H61 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Bluetooth	None		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Machine	Model(s) with Non multi-touch, Frame stand: <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 14.6 lb (6.6 kg) in maximum configuration● Handle in rear, removable feet● Support VESA mount (100mm)		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s)
Limited Warranty	1-year, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
			Supports ThinkVantage Technologies
			For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre M72z (3548) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/Mouse	Global	Win7 preload	Ann date (mm/dd/yy)
3548-A9U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	2.4G	None	Pro 64	06/05/12
3548-B1U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Pro 64	06/05/12
3548-B2U	i7-3770S	4GBx2 1600MHz	2.0M	500G 7200	HD 4000	11b/g/n	Media	None	None	None	Monitor	USB	None	Pro 64	06/05/12
3548-B3U	i7-3770S	4GBx2 1600MHz	2.0M	500G 7200	HD 4000	11b/g/n	Media	None	None	None	Monitor	2.4G	None	Pro 64	06/05/12
3548-C1U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	Serial	None	Monitor	USB	None	Pro 64	09/04/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	Processor		Mainstream All-In-One PC for the enterprise		Preloaded operating system ²⁰	
	Processor		Intel® Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller Intel Core i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-3770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD 4000 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Genuine Windows® 7 Professional 64 Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager● Business-in-a-Box Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Automatic Lock Utility● ThinkVantage Power Manager● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● RapidBoot HDD Accelerator● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● InterVideo WinDVD® (DVD, DVD±RW)	
Implementation	Memory		16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)			
	Graphics		Intel HD Graphics 2500 or Intel HD Graphics 4000 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz</i>			
	DP dongle		None			
	Display		20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio			
	Multi-touch		None			
	Camera		Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off			
	Controls		Front facing buttons for brightness up/auto, brightness down, and power on/off			
	Disk		SATA 3.0Gb/s, 3.5" Wide, 7200 rpm			
	Optical		DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable			
	Media reader		<i>Some:</i> 7-in-1 Single Slot SD media reader			
	Chipset		Intel H61 Express Chipset			
	Rear ports		Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)			
	Side ports		Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
	PCIe Mini Card		One PCI Express® Mini Card slot			
	PCIe WLAN		11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2			
	Bluetooth		Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter			
	Ethernet		One gigabit ethernet port, Realtek® RTL8111E-VB			
	Audio		High Definition (HD) Audio, Realtek ALC269Q			
	Speaker		Two internal stereo speakers (2watt x 2)			
	Intel AMT		None			
	Modem		None			
	IEEE 1394		None			
	Security chip		Trusted Platform Module (TPM 1.2-compliant)			
	Keyboard		<i>Some:</i> Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black			
	Mouse		<i>Some:</i> Enhanced Optical USB Mouse, black, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black			
	Power supply		150 watts, autosensing, 85% PSU			
	Machine		<i>Model(s) with Non multi-touch, Monitor stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 8.9" D X 17.0" H● 507mm W X 227mm D X 431mm H (including stand)● 18.5 lb (8.4 kg) in maximum configuration● Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°● Support VESA mount (100mm)			
	Limited Warranty		3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			
					EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant	
					Supports ThinkVantage Technologies	
					For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet	

ThinkCentre M72z (3548) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/ Mouse	Global	Win7 preload	Ann date (mm/dd/yy)
3548-B4U	G640	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	None	None	None	None	Monitor	USB	None	Pro 64	07/24/12
3548-B9U	G640	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	None	None	Serial	None	Monitor	USB	None	Pro 64	08/14/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Pentium® G640 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager● Business-in-a-Box Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Automatic Lock Utility● ThinkVantage Power Manager● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● RapidBoot HDD Accelerator● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● InterVideo WinDVD® (DVD, DVD±RW)
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook); <i>System automatically clocks down for processors with 1066MHz DDR3 memory controller</i>		
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz</i>		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Media reader	None		
Chipset	Intel H61 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Machine	<i>Model(s) with Non multi-touch, Monitor stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 8.9" D X 17.0" H● 507mm W X 227mm D X 431mm H (including stand)● 18.5 lb (8.4 kg) in maximum configuration● Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°● Support VESA mount (100mm)		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
	Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet		

ThinkCentre M72z (3548) - TopSeller (Win 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/ Mouse Global	Preload	Ann date (mm/dd/yy)
3548-C6U	i5-3470T	4GBx1 1600MHz	2.0M	1TB 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win8 Pro64 10/23/12
3548-C7U	i7-3770S	4GBx2 1600MHz	2.0M	1TB 7200	HD 4000	11b/g/n	Media	None	None	None	Monitor	USB	None	Win8 Pro64 10/23/12
3548-C8U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 10/23/12
3548-C9U	i3-3240	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 10/23/12
3548-D1U	G640	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 10/23/12
3548-D2U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Monitor	USB	None	Win7 Pro64 10/23/12
≠ 3548-D3U	G860	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	None	None	None	None	Monitor	USB	None	Win7 Pro64 10/23/12
3548-F2U	i3-3220	4GBx1 1600MHz	2.0M	180G SSD	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 11/20/12
3548-F4U	G2020	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 01/22/13
3548-F7U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 03/05/13
3548-F9U	i7-3770S	8GBx1 1600MHz	2.0M	1TB 7200	HD 4000	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 03/05/13
3548-G1U	i5-3470S	4GBx1 1600MHz	2.0M	1TB 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64 03/12/13
Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Pentium® G640 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache), integrated Intel HD Graphics, integrated DDR3 memory controller (up to 1066MHz) Intel Pentium G2020 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), integrated Intel HD Graphics, integrated DDR3 memory controller (up to 1333MHz) Intel Pentium G860 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), integrated Intel HD Graphics, integrated DDR3 memory controller (up to 1333MHz) Intel Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated DDR3 memory controller (up to 1600MHz) Intel Core i3-3240 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated DDR3 memory controller (up to 1600MHz) Intel Core i5-3470S Processor (2 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-3770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD 4000 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket										Preloaded operating system²⁰ <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models <ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage Communication Utility • ThinkVantage Power Manager • Lenovo® Message Center Plus • RapidBoot HDD Accelerator • Lenovo SimpleTap • Adobe® Reader® • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) • InterVideo WinDVD® (DVD, DVD±RW) - Windows 8 models <ul style="list-style-type: none"> • Lenovo Support • Lenovo Settings • Lenovo Companion • Lenovo Cloud Storage • Norton™ Studio • AccuWeather • Evernote® • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none"> • ThinkVantage System Update • ThinkVantage Automatic lock Utility • Lenovo Solution Center • View Management Utility • Norton Internet Security (30 days of virus definitions) • Microsoft® Office preloaded; purchase a product key to activate • Skype™ 			
Implementation														
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook) <i>System automatically clocks down for processors with 1066MHz or 1333MHz DDR3 memory controller</i>													
Graphics	Intel HD Graphics / 2500 / 4000 in processor, uses main memory, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz</i>													
DP dongle	None													
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio													
Multi-touch	None													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off													
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off													
Disk	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 3.5" Wide, 7200 rpm													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
Media reader	<i>Some:</i> 7-in-1 Single Slot SD media reader													
Chipset	Intel H61 Express Chipset													
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express® Mini Card slot													
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2													
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter													
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB													
Audio	High Definition (HD) Audio, Realtek ALC269Q													
Speaker	Two internal stereo speakers (2watt x 2)													
Intel AMT	None													
Security chip	Trusted Platform Module (TPM 1.2-compliant)													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU													
Machine	Model(s) with Non multi-touch, Monitor stand: <ul style="list-style-type: none"> • Business black color • 20.0" W X 8.9" D X 17.0" H • 507mm W X 227mm D X 431mm H (including stand) • 18.5 lb (8.4 kg) in maximum configuration • Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45° • Support VESA mount (100mm) 										Security <ul style="list-style-type: none"> • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Chassis intrusion switch on selected model(s) 			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet			

See footnotes for important warranty information

US models announced Oct 23, 2012, Nov 20, 2012, Jan 22, 2013, Mar 5, 2013, or Mar 12, 2013

≠ US model(s) withdrawn effective November 2013

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(MTG11-6) March 2013

ThinkCentre M72z (3548) - TopSeller (Win 8) - III

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/Mouse	Global	Preload	Ann date (mm/dd/yy)
3548-H2U	i7-3770S	8GBx1 1600MHz	2.0M	500G 7200	HD 4000	11b/g/n	Media	None	None	None	Monitor	2.4G	None	Win7 Pro64	06/11/13
3548-H3U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	2.4G	None	Win7 Pro64	06/11/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Core™ i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-3770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD 4000 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system²⁰ Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager● Business-in-a-Box Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Automatic Lock Utility● ThinkVantage Power Manager● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● RapidBoot HDD Accelerator● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● InterVideo WinDVD® (DVD, DVD±RW)	
Implementation			Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)			
Graphics	Intel HD Graphics 2500 or Intel HD Graphics 4000 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz</i>			
DP dongle	None			
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio			
Multi-touch	None			
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off			
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off			
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm			
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable			
Media reader	7-in-1 Single Slot SD media reader			
Chipset	Intel H61 Express Chipset			
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)			
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
PCIe Mini Card	One PCI Express® Mini Card slot			
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2			
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter			
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB			
Audio	High Definition (HD) Audio, Realtek ALC269Q			
Speaker	Two internal stereo speakers (2watt x 2)			
Intel AMT	None			
Modem	None			
IEEE 1394	None			
Security chip	Trusted Platform Module (TPM 1.2-compliant)			
Keyboard	Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black			
Mouse	Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black			
Power supply	150 watts, autosensing, 85% PSU			
Machine	<i>Model(s) with Non multi-touch, Monitor stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 8.9" D X 17.0" H● 507mm W X 227mm D X 431mm H (including stand)● 18.5 lb (8.4 kg) in maximum configuration● Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°● Support VESA mount (100mm)			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information
US models announced June 11, 2013

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ThinkCentre M72z (3548) - TopSeller (Win 8) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/ Mouse Global	Preload	Ann date (mm/dd/yy)
3548-E9U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Frame	USB	None	Win7 Pro64 11/20/12
3548-F1U	G645	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	None	None	Frame	USB	None	Win7 Pro64 11/20/12
3548-F3U	G645	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	Serial	None	Frame	USB	None	Win7 Pro64 11/20/12
3548-F6U	G2120	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	None	None	Frame	USB	None	Win7 Pro64 12/04/12
3548-F5U	G2020	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	None	None	Frame	USB	None	Win7 Pro64 01/22/13
3548-F8U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Frame	USB	None	Win7 Pro64 03/05/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Pentium® G645 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G2020 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G2120 Processor (2 cores / 2 threads, 3.1GHz, 3MB cache), integrated Intel HD Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system²⁰ Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager ● Business-in-a-Box Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Automatic Lock Utility ● ThinkVantage Power Manager ● View Management Utility ● Lenovo Solution Center ● Lenovo Message Center Plus ● RapidBoot HDD Accelerator ● Lenovo SimpleTap ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Windows Live™ Essentials ● Microsoft® Office preloaded; purchase a product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW) ● InterVideo WinDVD® (DVD, DVD±RW)
Implementation			
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook) <i>System automatically clocks down for processors with 1066MHz or 1333MHz DDR3 memory controller</i>		
Graphics	Intel HD Graphics or Intel HD Graphics 2500 in processor, uses main memory, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz</i>		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	Hard Disk Drive / SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Media reader	7-in-1 Single Slot SD media reader		
Chipset	Intel H61 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> ● Business black color ● 20.0" W X 4.0" D X 16.2" H ● 507mm W X 101mm D X 411mm H (including stand) ● 14.6 lb (6.6 kg) in maximum configuration ● Handle in rear, removable feet ● Support VESA mount (100mm)		Security ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● USB port disablement ● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US models announced Nov 20, 2012, Dec 4, 2012, Jan 22, 2013, or Mar 5, 2013

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Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/Mouse	Global	Win7 preload	Ann date (mm/dd/yy)
3554-E2U	i7-3770S	4GBx2 1600MHz	2.0M	500G 7200	HD 4000	11b/g/n	Media	None	None	None	Monitor	USB	None	Pro 64	06/05/12
3554-E3U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Monitor	USB	None	Pro 64	06/05/12
3554-E4U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Prem 64	06/05/12
3554-E5U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Frame	USB	None	Pro 64	06/05/12
3554-E6U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Monitor	USB	None	Prem 32	06/05/12

●3-year limited warranty

Positioning Processor	<i>Mainstream All-In-One PC for the enterprise</i> Intel® Core™ i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-3770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD 4000 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system²⁰ <i>Some:</i> Genuine Windows® 7 Home Premium 32 <i>Some:</i> Genuine Windows® 7 Home Premium 64 <i>Some:</i> Genuine Windows 7 Professional 64
Implementation			Ready to install applications (only some listed)
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		<ul style="list-style-type: none">● Rescue and Recovery™● Password Manager● Business-in-a-Box Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Automatic Lock Utility● ThinkVantage Power Manager● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● RapidBoot HDD Accelerator● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● InterVideo WinDVD® (DVD, DVD±RW)
Graphics	Intel HD Graphics 2500 or Intel HD Graphics 4000 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort) @60Hz</i>		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Media reader	<i>Some:</i> 7-in-1 Single Slot SD media reader		
Chipset	Intel H61 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 14.6 lb (6.6 kg) in maximum configuration● Handle in rear, removable feet● Support VESA mount (100mm) <i>Model(s) with Non multi-touch, Monitor stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 8.9" D X 17.0" H● 507mm W X 227mm D X 431mm H (including stand)● 18.5 lb (8.4 kg) in maximum configuration● Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°● Support VESA mount (100mm)		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant
			Supports ThinkVantage Technologies
			For compatible accessories, please go to O-M72Z sheet;
			For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre M72z (3554) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/Mouse	Global	Preload	Ann date (mm/dd/yy)
3554-H2U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Monitor	USB	None	Win8 Pro64	10/23/12
3554-H3U	i3-3240	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win8 Pro64	10/23/12
3554-H4U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Monitor	USB	None	Win8 Pro64	10/23/12
3554-H7U	i5-3570S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Monitor	USB	None	Win8 Pro64	10/23/12
3554-H8U	i7-3770S	4GBx1 1600MHz	2.0M	1TB 7200	HD 4000	11b/g/n	Media	None	None	None	Monitor	USB	None	Win8 Pro64	10/23/12
3554-M9U	i5-3470S	4GBx1 1600MHz	2.0M	180G SSD	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64	11/20/12
3554-Q6U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Monitor	USB	None	Win7 Pro64	07/09/13

Positioning	Mainstream All-In-One PC for the enterprise										Preloaded operating system ²⁰				
Processor	Intel® Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated DDR3 memory controller (up to 1600MHz) Intel Core i3-3240 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated DDR3 memory controller (up to 1600MHz) Intel Core i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3570S Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-3770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD 4000 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket										Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Some: Windows 8 Pro 64-bit				
Implementation	Processor in LGA1155 socket										Preloaded applications (only some listed)				
Memory	16GB max, PC3-12800 1600MHz DDR3, two 204-pin SODIMM sockets (notebook)										- Windows 7 models				
Graphics	Intel HD Graphics 2500 or Intel HD Graphics 4000 in processor, uses main memory, external digital monitor support via DisplayPort™, supports dual independent display; Maximum resolution: 2560x1600 (DisplayPort)@60Hz										<ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage Communication Utility• ThinkVantage Power Manager• Lenovo® Message Center Plus• RapidBoot HDD Accelerator• Lenovo SimpleTap• Adobe® Reader®• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)• InterVideo WinDVD® (DVD, DVD±RW)				
DP dongle	None										- Windows 8 models				
Display	20.0" (508mm) HD+ (1600x900) TFT color, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio										<ul style="list-style-type: none">• Lenovo Support• Lenovo Settings• Lenovo Companion• Lenovo Cloud Storage• Norton™ Studio• AccuWeather• Evernote®• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)				
Multi-touch	None										- All models				
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off										<ul style="list-style-type: none">• ThinkVantage System Update• ThinkVantage Automatic lock Utility• Lenovo Solution Center• View Management Utility• Norton Internet Security (30 days of virus definitions)• Microsoft® Office preloaded; purchase a product key to activate• Skype™				
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off										Security				
Disk	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide Some: Hard Disk Drive / SATA 3.0Gb/s, 3.5" Wide, 7200 rpm										<ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)				
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable										<ul style="list-style-type: none">• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• USB port disablement• Chassis intrusion switch on selected model(s)				
Media reader	Some: 7-in-1 Single Slot SD media reader										EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant				
Chipset	Intel H61 Express Chipset										Supports ThinkVantage Technologies				
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)										For compatible accessories, please go to O-M72Z sheet;				
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										For Lenovo service upgrade options, please go to S-TC sheet				
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2														
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2watt x 2)														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	Trusted Platform Module (TPM 1.2-compliant)														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU														
Machine	Model(s) with Non multi-touch, Monitor stand: <ul style="list-style-type: none">• Business black color• 20.0" W X 8.9" D X 17.0" H• 507mm W X 227mm D X 431mm H (including stand)• 18.5 lb (8.4 kg) in maximum configuration• Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°• Support VESA mount (100mm)														
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														

ThinkCentre M72z (3554) - Windows 8 - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/Mouse Global	Preload	Ann date (mm/dd/yy)
3554-H1U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Frame	USB	None	Win8 Pro64 10/23/12
3554-H5U	i5-3470S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Frame	USB	None	Win8 Pro64 10/23/12
3554-H6U	i5-3570S	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	None	None	None	None	Frame	USB	None	Win8 Pro64 10/23/12
3554-H9U	i7-3770S	4GBx1 1600MHz	2.0M	1TB 7200	HD 4000	11b/g/n	Media	None	None	None	Frame	USB	None	Win8 Pro64 10/23/12
3554-M7U	i3-3220	4GBx1 1600MHz	2.0M	500G 7200	HD 2500	11b/g/n	Media	None	None	None	Frame	USB	None	Win7 Pro64 11/20/12
3554-N1U	G2020	2GBx1 1600MHz	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	None	None	Frame	USB	None	Win7 Pro64 01/22/13

Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Pentium® G2020 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3570S Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-3770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD 4000 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket										Preloaded operating system²⁰ <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 8 Pro 64-bit Preloaded applications (only some listed) - Windows 7 models <ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage Communication Utility • ThinkVantage Power Manager • Lenovo® Message Center Plus • RapidBoot HDD Accelerator • Lenovo SimpleTap • Adobe® Reader® • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) • InterVideo WinDVD® (DVD, DVD±RW) - Windows 8 models <ul style="list-style-type: none"> • Lenovo Support • Lenovo Settings • Lenovo Companion • Lenovo Cloud Storage • Norton™ Studio • AccuWeather • Evernote® • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none"> • ThinkVantage System Update • ThinkVantage Automatic lock Utility • Lenovo Solution Center • View Management Utility • Norton Internet Security (30 days of virus definitions) • Microsoft® Office preloaded; purchase a product key to activate • Skype™ 				
Implementation	Processor in LGA1155 socket														
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook) <i>System automatically clocks down for processors with 1333MHz DDR3 memory controller</i>														
Graphics	Intel HD Graphics / 2500 / 4000 in processor, uses main memory, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	Hard Disk Drive / SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
Media reader	<i>Some:</i> 7-in-1 Single Slot SD media reader														
Chipset	Intel H61 Express Chipset														
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2														
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2watt x 2)														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	Trusted Platform Module (TPM 1.2-compliant)														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU														
Machine	Model(s) with Non multi-touch, Frame stand: <ul style="list-style-type: none"> • Business black color • 20.0" W X 4.0" D X 16.2" H • 507mm W X 101mm D X 411mm H (including stand) • 14.6 lb (6.6 kg) in maximum configuration • Handle in rear, removable feet • Support VESA mount (100mm) 										Security <ul style="list-style-type: none"> • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Chassis intrusion switch on selected model(s) 				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information

US models announced October 23, 2012, November 20, 2012, or January 22, 2013

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ThinkCentre M72z (3558) - GMP

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁸	Camera (mega-pixel)	Disk SATA GB	rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/ Mouse	Global (G) GMP (P)	Win7 preload	Ann date (mm/dd/yy)
3558-A2U	i5-3550S	4GBx1 1600MHz	2.0M	250G	7200	HD 2500	11b/g/n	Media	Switch	None	None	Frame	USB	G P	Pro 64	06/05/12
3558-A4U	i5-3570S	4GBx1 1600MHz	2.0M	500G	7200	HD 2500	11b/a/n	Media	Switch	None	None	Frame	USB	G P	Pro 64	08/14/12

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	<i>Mainstream All-In-One PC for the enterprise</i> Intel® Core™ i5-3550S Processor (4 cores / 4 threads , 3.0GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3570S Processor (4 cores / 4 threads , 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket	Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager● Business-in-a-Box Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Automatic Lock Utility● ThinkVantage Power Manager● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● RapidBoot HDD Accelerator● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● InterVideo WinDVD® (DVD, DVD±RW)
Implementation		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics 2500 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort) @60Hz	
DP dongle	None	
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio	
Multi-touch	None	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off	
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off	
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
Media reader	7-in-1 Single Slot SD media reader	
Chipset	Intel H61 Express Chipset	
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2	
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter	
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB	
Audio	High Definition (HD) Audio, Realtek ALC269Q	
Speaker	Two internal stereo speakers (2watt x 2)	
Intel AMT	None	
Modem	None	
IEEE 1394	None	
Security chip	Trusted Platform Module (TPM 1.2-compliant)	Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● <i>Chassis intrusion switch on selected model(s)</i>
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo	
Power supply	150 watts, autosensing, 85% PSU	
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 14.6 lb (6.6 kg) in maximum configuration● Handle in rear, removable feet● Support VESA mount (100mm)	EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	Supports ThinkVantage Technologies For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre M72z (3558) - GMP (Thin Client)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁸	Camera (mega- pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key- board/ Mouse	Global (G) GMP (P)	Win7 preload	Ann date (mm/dd/yy)
≈ 3558-A5U	G460	2GBx1 1600MHz	None	8G SSD	None	Intel HD	11b/g/n	None	Switch	Serial	None	Frame	USB	G P	Emb 32	11/20/12
≈ 3558-A7U	G465	2GBx1 1600MHz	None	8G SSD	None	Intel HD	11b/g/n	None	Switch	Serial	None	Frame	USB	G P	Emb 32	01/08/13
3558-A8U	G470	2GBx1 1600MHz	None	8G SSD	None	Intel HD	11b/g/n	None	Switch	Serial	None	Frame	USB	G P	Emb 32	06/11/13

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Celeron® G460 Processor (1 core / 2 threads, 1.8GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Celeron G465 Processor (1 core / 2 threads, 1.9GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Celeron G470 Processor (1 core / 2 threads, 2.0GHz, 1.5MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system ²⁰ Genuine Windows® 7 Embedded 32 Preloaded applications (only some listed) <ul style="list-style-type: none">● Adobe® Reader®● Adobe Flash® Player● Citrix® Receiver● IIS Web Server● Microsoft® Management Console● Microsoft Silverlight● Remote Desktop Protocol● ThinPrint .print Client● TightVNC Viewer● VMware® View Client● vWorkspace● Windows Media Player	
Implementation	Processor in LGA1155 socket		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook) <i>System automatically clocks down for processors with 1066MHz DDR3 memory controller</i>			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort) @60Hz</i>			
DP dongle	None			
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio			
Multi-touch	None			
Camera	None			
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off			
Disk	Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" Wide			
Optical	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)			
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
PCIe Mini Card	One PCI Express® Mini Card slot			
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2			
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter			
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB			
Audio	High Definition (HD) Audio, Realtek ALC269Q			
Speaker	Two internal stereo speakers (2watt x 2)			
Intel AMT	None			
Modem	None			
IEEE 1394	None			
Security chip	Trusted Platform Module (TPM 1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	150 watts, autosensing, 85% PSU			
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 14.6 lb (6.6 kg) in maximum configuration● Handle in rear, removable feet● Support VESA mount (100mm)			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information
 US models announced November 20, 2012 or January 8 or June 11, 2013
 ≈ US model(s) withdrawn effective November 2013

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ThinkCentre M72z (3558) - GMP (Win 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial port	PS/2 port	Stand type	Key-board/ Mouse	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
3558-A3U	i5-3470S	4GBx1	1600MHz	2.0M	500G 7200 HD 2500	11b/g/n	Media	Switch	None	None	Frame	USB	G P	Win8 Pro64	10/23/12
3558-A6U	i5-3470S	4GBx1	1600MHz	2.0M	500G 7200 HD 2500	11b/g/n	Media	None	None	None	Frame	USB	G P	Win7 Pro64	10/23/12

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Core™ i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system²⁰ <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 8 Pro 64-bit
Implementation	Processor in LGA1155 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 2500 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio		
Multi-touch	Nonep		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Media reader	7-in-1 Single Slot SD media reader		
Chipset	Intel H61 Express Chipset		Preloaded applications (only some listed) - Windows 7 models <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage Communication Utility● ThinkVantage Power Manager● Lenovo® Message Center Plus● RapidBoot HDD Accelerator● Lenovo SimpleTap● Adobe® Reader®● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● InterVideo WinDVD® (DVD, DVD±RW) - Windows 8 models <ul style="list-style-type: none">● Lenovo Support● Lenovo Settings● Lenovo Companion● Lenovo Cloud Storage● Norton™ Studio● AccuWeather● Evernote®● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW) - All models <ul style="list-style-type: none">● ThinkVantage System Update● ThinkVantage Automatic lock Utility● Lenovo Solution Center● View Management Utility● Norton Internet Security (30 days of virus definitions)● Microsoft® Office preloaded; purchase a product key to activate● Skype™
Rear ports	Four USB 2.0, ethernet (RJ-45), DisplayPort connector, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel 2230 Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 14.6 lb (6.6 kg) in maximum configuration● Handle in rear, removable feet● Support VESA mount (100mm)		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M72Z sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information
US models announced October 23, 2012

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Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann 06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann 06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann 06/05/12

More information at

www.lenovo.com/support/desktopmemorycompatibility**Storage and removable storage**

500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09

More information at www.lenovo.com/support/mice**Modem**

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Speakers M0520 (black)	57Y6360	ann 02/08/11
Lenovo Speakers M0520 (red)	57Y6361	ann 02/08/11
Lenovo Headset P550	55Y2065	
Lenovo Headset P950 (black)	57Y6605	ann 02/08/11

Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2323p Wide 23" (VGA, DP, DVI-D) ⁶⁹	3024HC1	ann 05/01/12

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann 08/14/12
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm ⁷⁰	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.⁷⁰ Desk Mount only.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



ThinkCentre M73z with Frame Stand
and optional wireless keyboard and mouse



ThinkCentre M73z with Monitor Stand
and optional wireless keyboard and mouse



ThinkCentre M73z with Frame Stand
with optional PS/2 and Serial ports



ThinkCentre M73z with Monitor Stand
with optional PS/2 and Serial ports



ThinkCentre M73z with Frame Stand
with optional wireless keyboard and mouse



ThinkCentre M73z with Monitor Stand
with optional wireless keyboard and mouse

ThinkCentre M73z (10BC) - TopSeller (1-year Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial & PS/2 port	Stand type	Key-board/Mouse	Global	Preload	Ann date (mm/dd/yy)
10BC0005US	i5-4430S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N105	None	None	None	Frame	USB	None	Win7 Pro64 DG	09/24/13
10BC000HUS	G3220	2GBx1 1600MHz	720p	500G 7200	Intel HD	N105	None	None	None	Frame	USB	None	Win7 Pro64 DG	09/24/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Mainstream All-In-One PC for the enterprise		Preloaded operating system ²⁰ Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Nitro Pro
Processor	Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Implementation			
Memory	16GB max, 1600MHz DDR3L, two 204-pin SODIMM sockets (notebook) *System automatically clocks down for processors with 1333MHz memory controller		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, external digital monitor support via VGA, supports dual independent display; Maximum resolution: 1600x900 (panel)@60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	None		
Camera	Optional camera on top of screen, 1.0-megapixel, fixed focus, supports 720p, with digital microphone, physical switch on/off		
Controls	Side buttons for brightness up, brightness down, and power on/off		
Disk	Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high		
Media reader	Optional 7-in-1 Single Slot media reader, via internal USB 2.0		
Chipset	Intel H81 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), VGA out connector, optional serial (9-pin), two optional PS/2 ports (keyboard and mouse)		
Side ports	Two USB 3.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Bluetooth	None		
Ethernet	One gigabit ethernet port, Intel I217-V		
Audio	High Definition (HD) Audio, Realtek ALC269VC		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Mechanical	<ul style="list-style-type: none">● Business black color● Carry handle in rear● Support VESA mount (100mm) With Frame stand: 19.9" W X 3.56" D X 15.9" H 506mm W X 90.5mm D X 404.75mm H 16.4 lb (7.46 kg) in maximum configuration Adjustable stand (between 10° and 35°) With Monitor stand: 19.9" W X 9.83" D X 16.7" H 506mm W X 249.8mm D X 423.9mm H 19.5 lb (8.84 kg) in maximum configuration Tilt: 10° to 25°; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Limited Warranty	1-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced September 24, 2012

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ThinkCentre M73z (10BC) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial S P port	Stand type	Key-board/Mouse	Global	Preload	Ann date (mm/dd/yy)
10BC0001US	i7-4770S	8GBx1 1600MHz	720p	500G Hybrid	HD 4600	N2230	Media	None	S P	Monitor	2.4G	None	Win7 Pro64 DG	09/24/13
10BC0002US	i7-4770S	4GBx1 1600MHz	720p	1TB 7200	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC0003US	i5-4430S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N2230	Media	None	None	Frame	USB	None	Win7 Pro64 DG	09/24/13
10BC0004US	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC0006US	i5-4570S	4GBx1 1600MHz	720p	500G Hybrid	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC0007US	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N2230	None	None	None	Frame	USB	None	Win7 Pro64 DG	09/24/13
10BC0008US	i5-4570S	4GBx1 1600MHz	720p	180G SSD	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC0009US	i5-4570S	4GBx1 1600MHz	720p	128G SSD	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system²⁰ Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Nitro Pro
Implementation			
Memory	16GB max, 1600MHz DDR3L , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, external digital monitor support via VGA, supports dual independent display; <i>Maximum resolution:</i> 1600x900 (panel) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	None		
Camera	Optional camera on top of screen, 1.0-megapixel, fixed focus, supports 720p, with digital microphone, physical switch on/off		
Controls	Side buttons for brightness up, brightness down, and power on/off		
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide		
Optical Media reader	DVD burner, SATA 1.5Gb/s, 12.7mm high Optional 7-in-1 Single Slot media reader, via internal USB 2.0		
Chipset	Intel H81 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), VGA out connector, optional serial (9-pin), two optional PS/2 ports (keyboard and mouse)		
Side ports	Two USB 3.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-V		
Audio	High Definition (HD) Audio, Realtek ALC269VC		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), Lenovo® logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black		
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black		
Power supply	150 watts, autosensing, 85% PSU		
Mechanical	<ul style="list-style-type: none">● Business black color● Carry handle in rear● Support VESA mount (100mm) <i>With Frame stand:</i> 19.9" W X 3.56" D X 15.9" H 506mm W X 90.5mm D X 404.75mm H 16.4 lb (7.46 kg) in maximum configuration Adjustable stand (between 10° and 35°) <i>With Monitor stand:</i> 19.9" W X 9.83" D X 16.7" H 506mm W X 249.8mm D X 423.9mm H 19.5 lb (8.84 kg) in maximum configuration Tilt: 10° to 25°; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

			Security - Security chip (see information on left) - Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) - Power-on password - Administrator password - Hard disk password - Boot sequence control - Boot without keyboard and mouse - USB port disablement - Chassis intrusion switch on selected model(s)
			EPEAT™ Gold rating ENERGY STAR® 5.2-compliant Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant EuP 2013 Certified
			Supports ThinkVantage Technologies
			For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information
US model(s) announced September 24, 2012

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(MDST1-1) September 2013

ThinkCentre M73z (10BC) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial & PS/2 port	Stand type	Key-board/Mouse	Global	Preload	Ann date (mm/dd/yy)
10BC000BUS	i5-4670S	8GBx1	720p	1TB 7200	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC000CUS	i7-4770S	8GBx1	720p	1TB 7200	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC000DUS	i3-4130	4GBx1	720p	500G 7200	HD 4400	N2230	None	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC000EUS	i3-4130	4GBx1	720p	500G 7200	HD 4400	N2230	None	None	None	Frame	USB	None	Win7 Pro64 DG	09/24/13
10BC000FUS	i3-4130	4GBx1	720p	500G Hybrid	HD 4400	N2230	None	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC000GUS	G3220	2GBx1	720p	500G 7200	Intel HD	N2230	None	None	None	Monitor	USB	None	Win7 Pro64 DG	09/24/13
10BC000QUS	i5-4570S	4GBx1	720p	500G 7200	HD 4600	N2230	Media	None	None	None	USB	None	Win7 Pro64 DG	11/12/13
10BC000YUS	G3220	2GBx1	720p	500G 7200	Intel HD	N7260	None	None	None	Monitor	USB	None	Win7 P64 DG Win8.1	01/21/14
10BC0010US	i3-4130	4GBx1	720p	500G 7200	HD 4400	N7260	None	None	None	Monitor	USB	None	Win7 P64 DG Win8.1	01/21/14
10BC0011US	i5-4570S	4GBx1	720p	500G 7200	HD 4400	N7260	None	None	None	Monitor	USB	None	Win7 P64 DG Win8.1	01/21/14
10BC0014US	G1820	2GBx1	720p	500G 7200	Intel HD	N7260	None	None	None	Frame	USB	None	Win7 P64 DG Win8.1	03/04/14
Positioning Processor	<i>Mainstream All-In-One PC for the enterprise</i> Intel® Celeron® G1820 Processor (2 cores / 2 threads, 2.7GHz, 2MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670S Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Preloaded operating system²⁰ <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Device Experience ● ThinkVantage AutoLock ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Nitro Pro		
Implementation												Security ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● USB port disablement ● Chassis intrusion switch on selected model(s)		
Memory	16GB max, 1600MHz DDR3L , two 204-pin SODIMM sockets (notebook) *System automatically clocks down for processors with 1333MHz memory controller													
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, external digital monitor support via VGA, supports dual independent display; <i>Maximum resolution:</i> 1600x900 (panel) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)													
DP dongle	None													
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio													
Multi-touch	None													
Camera	Optional camera on top of screen, 1.0-megapixel, fixed focus, supports 720p, with digital microphone, physical switch on/off													
Controls	Side buttons for brightness up, brightness down, and power on/off													
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high													
Media reader	Optional 7-in-1 Single Slot media reader, via internal USB 2.0													
Chipset	Intel H81 Express Chipset													
Rear ports	Four USB 2.0, ethernet (RJ-45), VGA out connector, optional serial (9-pin), two optional PS/2 ports (keyboard and mouse)													
Side ports	Two USB 3.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express® Mini Card slot													
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2													
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Ethernet	One gigabit ethernet port, Intel I217-V													
Audio	High Definition (HD) Audio, Realtek ALC269VC													
Speaker	Two internal stereo speakers (2watt x 2)													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	Trusted Platform Module (TPM 1.2-compliant)													
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU													
Mechanical	● Business black color ● Carry handle in rear ● Support VESA mount (100mm) <i>With Frame stand:</i> 19.9" W X 3.56" D X 15.9" H 506mm W X 90.5mm D X 404.75mm H 16.4 lb (7.46 kg) in maximum configuration Adjustable stand (between 10° and 35°) <i>With Monitor stand:</i> 19.9" W X 9.83" D X 16.7" H 506mm W X 249.8mm D X 423.9mm H 19.5 lb (8.84 kg) in maximum configuration Tilt: 10° to 25°; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait													
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information

US model(s) announced September 24 or November 12, 2013 or January 21 or March 4, 2014

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(MDST1-2) March 2014

ThinkCentre M73z (10BC) - TopSeller (Win8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial & PS/2 port	Stand type	Key-board/Mouse	Global	Preload	Ann date (mm/dd/yy)
10BC000AUS	i5-4570S	4GBx1 1600MHz	720p	500GB 7200	HD 4600	N2230	Media	None	None	Frame	USB	None	Win8 Pro64	09/24/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning	Mainstream All-In-One PC for the enterprise		Preloaded operating system Windows® 8 Pro 64-bit
Processor	Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller		
Implementation	Processor in LGA1150 socket		Web install applications (only some listed) <ul style="list-style-type: none">• Password Manager
Memory	16GB max, 1600MHz DDR3L, two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, external digital monitor support via VGA, supports dual independent display; Maximum resolution: 1600x900 (panel) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)		Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage System Update• ThinkVantage AutoLock• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Support• Lenovo Companion• Norton Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote®• Intel AppUp• Nitro Pro• AccuWeather• Norton™ Studio
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	None		
Camera	Optional camera on top of screen, 1.0-megapixel, fixed focus, supports 720p, with digital microphone, physical switch on/off		
Controls	Side buttons for brightness up, brightness down, and power on/off		
Disk	Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high		
Media reader	Optional 7-in-1 Single Slot media reader, via internal USB 2.0		
Chipset	Intel H81 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), VGA out connector, optional serial (9-pin), two optional PS/2 ports (keyboard and mouse)		
Side ports	Two USB 3.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Some: Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-V		
Audio	High Definition (HD) Audio, Realtek ALC269VC		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Mechanical	<ul style="list-style-type: none">• Business black color• Carry handle in rear• Support VESA mount (100mm) With Frame stand: 19.9" W X 3.56" D X 15.9" H 506mm W X 90.5mm D X 404.75mm H 16.4 lb (7.46 kg) in maximum configuration Adjustable stand (between 10° and 35°) With Monitor stand: 19.9" W X 9.83" D X 16.7" H 506mm W X 249.8mm D X 423.9mm H 19.5 lb (8.84 kg) in maximum configuration Tilt: 10° to 25°; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced September 24, 2012

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Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial & PS/2 port	Stand type	Key-board/Mouse	Global	Preload	Ann date (mm/dd/yy)
10BB0000US	i7-4770S	8GBx1 1600MHz	720p	1TB Hybrid	HD 4600	N2230	Media	None	S P	Monitor	USB	None	Win7 Pro64	09/24/13
10BB000FUS	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64	DG 09/24/13
10BB000GUS	i7-4770S	8GBx1 1600MHz	720p	500G Hybrid	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64	DG 09/24/13
10BB000HUS	i5-4430S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N105	None	None	None	Frame	USB	None	Win7 Pro64	DG 09/24/13
10BB000JUS	i5-4570S	4GBx1 1600MHz	720p	500G Hybrid	HD 4600	N2230	Media	None	S P	Monitor	2.4G	None	Win7 Pro64	DG 09/24/13
10BB001EUS	i7-4770S	8GBx1 1600MHz	720p	1TB 7200	HD 4600	N2230	Media	None	None	Monitor	USB	None	Win7 Pro64	DG 09/24/13
10BB001FUS	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N105	None	None	None	Frame	USB	None	Win7 Pro64	DG 09/24/13
10BB0021US	i3-4130	4GBx1 1600MHz	720p	500G 7200	HD 4400	N2230	None	None	None	Monitor	USB	None	Win7 Pro64	DG 09/24/13
10BB0022US	G3220	2GBx1 1600MHz	720p	500G 7200	Intel HD	N105	None	None	None	Monitor	USB	None	Win7 Pro64	DG 09/24/13
10BB0023US	i3-4130	4GBx1 1600MHz	720p	500G Hybrid	HD 4400	N2230	None	None	None	Monitor	USB	None	Win7 Pro64	DG 09/24/13
Positioning Processor	Mainstream All-In-One PC for the enterprise Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket										Preloaded operating system²⁰ <i>Some:</i> Windows 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none"> • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Device Experience • ThinkVantage AutoLock • Desktop Power Manager • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Microsoft Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Evernote • Intel AppUp • Nitro Pro 			
Implementation														
Memory	16GB max, 1600MHz DDR3L , two 204-pin SODIMM sockets (notebook) *System automatically clocks down for processors with 1333MHz memory controller													
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, external digital monitor support via VGA, supports dual independent display; <i>Maximum resolution:</i> 1600x900 (panel) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)													
DP dongle	None													
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio													
Multi-touch	None													
Camera	Optional camera on top of screen, 1.0-megapixel, fixed focus, supports 720p, with digital microphone, physical switch on/off													
Controls	Side buttons for brightness up, brightness down, and power on/off													
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 1TB (7200 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 3.5" wide <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide													
Optical Media reader	DVD burner, SATA 1.5Gb/s, 12.7mm high Optional 7-in-1 Single Slot media reader, via internal USB 2.0													
Chipset	Intel H81 Express Chipset													
Rear ports	Four USB 2.0, ethernet (RJ-45), VGA out connector, optional serial (9-pin), two optional PS/2 ports (keyboard and mouse)													
Side ports	Two USB 3.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express® Mini Card slot													
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2													
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Ethernet	One gigabit ethernet port, Intel I217-V													
Audio	High Definition (HD) Audio, Realtek ALC269VC													
Speaker	Two internal stereo speakers (2watt x 2)													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	Trusted Platform Module (TPM 1.2-compliant)													
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), Lenovo® logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black													
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black													
Power supply	150 watts, autosensing, 85% PSU													
Mechanical	<ul style="list-style-type: none"> • Business black color • Carry handle in rear • Support VESA mount (100mm) <i>With Frame stand:</i> 19.9" W X 3.56" D X 15.9" H 506mm W X 90.5mm D X 404.75mm H 16.4 lb (7.46 kg) in maximum configuration Adjustable stand (between 10° and 35°) <i>With Monitor stand:</i> 19.9" W X 9.83" D X 16.7" H 506mm W X 249.8mm D X 423.9mm H 19.5 lb (8.84 kg) in maximum configuration Tilt: 10° to 25°; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait										Security <ul style="list-style-type: none"> • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Chassis intrusion switch on selected model(s) 			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										EPEAT™ Gold rating ENERGY STAR® 5.2-compliant Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant EuP 2013 Certified Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet			

ThinkCentre M73z (10BB) - GMP

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial & PS/2 port	Stand type	Key-board/ Mouse	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10BB000EUS	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N2230	Media	Switch	None	Monitor	USB	G P	Win7 Pro64 DG	09/24/13
10BB001DUS	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N2230	Media	Switch	None	Frame	USB	G P	Win7 Pro64	09/24/13
10BB002VUS	i3-4130	4GBx1 1600MHz	720p	500G 7200	HD 4400	N2230	Media	Switch	None	Monitor	USB	G P	Win7 Pro64 DG	09/24/13

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	<i>Mainstream All-In-One PC for the enterprise</i> Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system²⁰ <i>Some:</i> Windows 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Nitro Pro
Implementation	Processor in LGA1150 socket		
Memory	16GB max, 1600MHz DDR3L , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, external digital monitor support via VGA, supports dual independent display; <i>Maximum resolution:</i> 1600x900 (panel) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	None		
Camera	Optional camera on top of screen, 1.0-megapixel, fixed focus, supports 720p, with digital microphone, physical switch on/off		
Controls	Side buttons for brightness up, brightness down, and power on/off		
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high		
Media reader	Optional 7-in-1 Single Slot media reader, via internal USB 2.0		
Chipset	Intel H81 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), VGA out connector, optional serial (9-pin), two optional PS/2 ports (keyboard and mouse)		
Side ports	Two USB 3.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-V		
Audio	High Definition (HD) Audio, Realtek ALC269VC		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Mechanical	<ul style="list-style-type: none">● Business black color● Carry handle in rear● Support VESA mount (100mm) <i>With Frame stand:</i> 19.9" W X 3.56" D X 15.9" H 506mm W X 90.5mm D X 404.75mm H 16.4 lb (7.46 kg) in maximum configuration Adjustable stand (between 10° and 35°) <i>With Monitor stand:</i> 19.9" W X 9.83" D X 16.7" H 506mm W X 249.8mm D X 423.9mm H 19.5 lb (8.84 kg) in maximum configuration Tilt: 10° to 25°; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced September 24, 2012

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ThinkCentre M73z (10BB) - GMP (Win8/8.1)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intrusion switch	Serial & PS/2 port	Stand type	Key-board/ Mouse	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10BB001CUS	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N2230	Media	Switch	None	Frame	USB	G P	Win8 Pro64	09/24/13
10BB003VUS	i5-4570S	4GBx1 1600MHz	720p	500G 7200	HD 4600	N7260	Media	Switch	None	Frame	USB	G P	Win8.1 Pro64	02/25/14

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning	Mainstream All-In-One PC for the enterprise										Preloaded operating system		
Processor	Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller										Some: Windows® 8 Pro 64-bit		
Implementation	Processor in LGA1150 socket										Some: Windows 8.1 Pro 64-bit		
Memory	16GB max, 1600MHz DDR3L , two 204-pin SODIMM sockets (notebook)										Web install applications (only some listed)		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, external digital monitor support via VGA, supports dual independent display; <i>Maximum resolution:</i> 1600x900 (panel)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)										• Password Manager		
DP dongle	None										Preloaded applications (only some listed)		
Display	20.0" (508mm) HD+ (1600x900) TFT color , LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio										• ThinkVantage System Update		
Multi-touch	None										• ThinkVantage AutoLock		
Camera	Optional camera on top of screen, 1.0-megapixel, fixed focus, supports 720p, with digital microphone, physical switch on/off										• Desktop Power Manager		
Controls	Side buttons for brightness up, brightness down, and power on/off										• View Management Utility (for Windows 8 only)		
Disk	Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm										• Lenovo Cloud Storage by SugarSync (for Windows 8 only)		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high										• Lenovo Solution Center		
Media reader	Optional 7-in-1 Single Slot media reader, via internal USB 2.0										• Lenovo Support		
Chipset	Intel H81 Express Chipset										• Lenovo Companion		
Rear ports	Four USB 2.0, ethernet (RJ-45), VGA out connector, optional serial (9-pin), two optional PS/2 ports (keyboard and mouse)										• Norton Internet Security (30 days of virus definitions)		
Side ports	Two USB 3.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										• Skype™		
PCIe Mini Card	One PCI Express® Mini Card slot										• Microsoft Office preloaded; purchase a product key to activate		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2										• Cyberlink Power2Go (DVD±RW, DVD)		
Bluetooth	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2										• Cyberlink PowerProducer (DVD±RW)		
Ethernet	Some: Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										• Evernote®		
Audio	One gigabit ethernet port, Intel I217-V										• Intel AppUp		
Speaker	High Definition (HD) Audio, Realtek ALC269VC										• Nitro Pro		
Intel AMT	Two internal stereo speakers (2watt x 2)										• AccuWeather		
Modem	None										• Norton™ Studio		
IEEE 1394	None										• Pokki (for Windows 8.1 only)		
Security chip	Trusted Platform Module (TPM 1.2-compliant)										• Hightail (for Windows 8.1 only)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo										Security		
Mouse	Enhanced Optical USB Mouse, Lenovo logo										• Security chip (see information on left)		
Power supply	150 watts, autosensing, 85% PSU										• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)		
Mechanical	<ul style="list-style-type: none"> • Business black color • Carry handle in rear • Support VESA mount (100mm) <i>With Frame stand:</i> 19.9" W X 3.56" D X 15.9" H 506mm W X 90.5mm D X 404.75mm H 16.4 lb (7.46 kg) in maximum configuration Adjustable stand (between 10° and 35°) <i>With Monitor stand:</i> 19.9" W X 9.83" D X 16.7" H 506mm W X 249.8mm D X 423.9mm H 19.5 lb (8.84 kg) in maximum configuration Tilt: 10° to 25°; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait										<ul style="list-style-type: none"> • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Chassis intrusion switch on selected model(s) 		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										EPEAT™ Gold rating		
											ENERGY STAR® 5.2-compliant		
											Cisco EnergyWise compatible		
											GREENGUARD® certified		
											RoHS-compliant		
											EuP 2013 Certified		
											Supports ThinkVantage Technologies		
											For compatible accessories, please go to TC-AQP sheet;		
											For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information

US model(s) announced September 24, 2013 or February 25, 2014

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(MDST1-7) February 2014

ThinkCentre M78 Small and Tower

ThinkCentre®



Lenovo ThinkCentre M78
Small and Tower



Lenovo ThinkCentre M78 Tower
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M78 Small



Lenovo ThinkCentre M78 Small
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M78 Tower



Lenovo ThinkCentre M78 Tower

ThinkCentre M78 Small (10BU) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis intrusion switch	PS/2 port	Floor stand	DP to DP Cable	Global	Preload	Ann date (mm/dd/yy)
10BU0000US	4x3	A4-5300	2GBx1	250G 7200	DVD±RW	None	None	HD 7480D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BU0001US	4x3	A6-5400B	4GBx1	500G 7200	DVD±RW	None	None	HD 7540D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BU0002US	4x3	A4-6300B	4GBx1	500G 7200	DVD±RW	None	None	HD 8370D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BU0003US	4x3	A6-6400B	4GBx1	500G 7200	DVD±RW	None	None	HD 8470D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BU0004US	4x3	A8-6500B	4GBx1	500G 7200	DVD±RW	None	None	HD 8570D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BU0005US	4x3	A8-6500B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Stand	Cable	None	Win7 Pro64 (DG)	10/01/13
10BU0006US	4x3	A6-6400B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Stand	Cable	None	Win7 Pro64 (DG)	10/01/13
10BU0007US	4x3	A4-6300B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Stand	Cable	None	Win7 Pro64 (DG)	10/01/13
10BU0008US	4x3	A4-6300B	2GBx1	500G 7200	DVD±RW	None	None	HD 8370D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/22/13
10BU0009US	4x3	A6-6400B	2GBx1	500G 7200	DVD±RW	None	None	HD 8470D	None	None	None	None	None	Win7 Pro64 (DG)	12/10/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

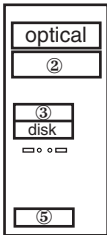
Positioning	Mainstream enterprise stability and manageability											Preloaded operating system			
Processor	AMD APU A4-5300 (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon™ HD 7480D Graphics, DDR3 memory controller (up to 1600MHz), AMD APU A4-6300B (dual-core, 3.7GHz, 1MB L2 cache), Turbo Core (up to 3.9GHz), AMD Radeon HD 8370D Graphics, DDR3 memory controller (up to 1600MHz), AMD APU A6-5400B (dual-core, 3.6GHz, 1MB L2 cache), Turbo Core (up to 3.8GHz), AMD Radeon HD 7540D Graphics, DDR3 memory controller (up to 1866MHz), AMD APU A6-6400B (dual-core, 3.9GHz, 1MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8470D Graphics, DDR3 memory controller (up to 1866MHz), AMD APU A8-6500B (quad-core, 3.5GHz, 4MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8570D Graphics, DDR3 memory controller (up to 1866MHz)											Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit			
Implementation	Processor in Socket FM2											Ready to install applications (only some listed)			
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3, four 240-pin DIMM sockets											● Rescue and Recovery™ ● Password Manager			
Graphics	AMD Radeon HD Graphics, integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; Maximum resolution: 1920x1200 (VGA) @60Hz; 2560x2048 (DisplayPort) @60Hz Some: AMD Radeon™ HD 8570, DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; Max resolution: 4096x2160 (HDMI) @24Hz; 2048x1536 (VGA) @85Hz											Preloaded applications (only some listed)			
DP cable	Some: DisplayPort to DisplayPort monitor cable											● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Power Manager ● View Management Utility ● PC Device Stage ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions)			
Disk	SATA 6.0Gb/s 7200 rpm											● Adobe® Reader® ● Skype™ ● Evernote® ● Microsoft® Office preloaded; purchase a product key to activate			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Nitro Pro			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	AMD A75 Chipset														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
PCIe WLAN	None														
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®														
Modem	None														
Security chip	Trusted Platform Module (TPM 1.2-compliant)														
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Floor Stand	Optional System floor stand for vertical orientation														
Power supply	240 watts, autosensing														
Machine	● Business black color; metal case ● 13.3" W X 15.0" D X 3.9" H ● 339mm W X 381mm D X 100mm H ● 16.5 lb (7.5 kg) in maximum configuration ● Toolless cover flips up and tilts backward on rear hinges ● Toolless disk and optical drive removal ● Toolless adapter retention														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader														
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3														
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														

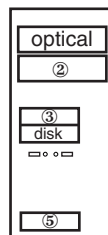
ThinkCentre M78 Tower (10BR) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis intrusion switch	PS/2 port	DP to DP Cable	Global	Preload	Ann date (mm/dd/yy)
10BR0000US	4x5	A4-5300	2GBx1	250G 7200	DVD±RW	None	None	HD 7480D	None	None	None	None	Win7 P64 DG Win8	10/01/13
10BR0001US	4x5	A6-5400B	4GBx1	500G 7200	DVD±RW	None	None	HD 7540D	None	None	None	None	Win7 P64 DG Win8	10/01/13
10BR0002US	4x5	A4-6300B	2GBx1	500G 7200	DVD±RW	None	None	HD 8370D	None	None	None	None	Win7 P64 DG Win8	10/01/13
10BR0004US	4x5	A6-6400B	4GBx1	500G 7200	DVD±RW	None	None	HD 8470D	None	None	None	None	Win7 P64 DG Win8	10/01/13
10BR0005US	4x5	A8-6500B	4GBx1	500G 7200	DVD±RW	None	None	HD 8570D	None	None	None	None	Win7 P64 DG Win8	10/01/13
10BR0006US	4x5	A8-6500B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Cable	None	Win7 P64 DG Win8	10/01/13
10BR0007US	4x5	A6-6400B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Cable	None	Win7 P64 DG Win8	10/01/13
10BR0008US	4x5	A4-6300B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Cable	None	Win7 P64 DG Win8	10/01/13
10BR000AUS	4x5	A4-6300B	4GBx1	500G 7200	DVD±RW	None	None	HD 8370D	None	None	None	None	Win7 P64 DG Win8.1	04/08/14

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 3-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability AMD APU A4-5300 (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon™ HD 7480D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A4-6300B (dual-core, 3.7GHz, 1MB L2 cache), Turbo Core (up to 3.9GHz), AMD Radeon HD 8370D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A6-5400B (dual-core, 3.6GHz, 1MB L2 cache), Turbo Core (up to 3.8GHz), AMD Radeon HD 7540D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A6-6400B (dual-core, 3.9GHz, 1MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8470D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A8-6500B (quad-core, 3.5GHz, 4MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8570D Graphics, DDR3 memory controller (up to 1866MHz)		Preloaded operating system Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit	
Implementation	Processor in Socket FM2		Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager	
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Power Manager● View Management Utility● PC Device Stage● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Evernote®● Microsoft® Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Nitro Pro	
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA)@60Hz; 2560x2048 (DisplayPort)@60Hz <i>Some:</i> AMD Radeon™ HD 8570 , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution:</i> 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz			
DP cable	<i>Some:</i> DisplayPort to DisplayPort monitor cable			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD A75 Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
PCIe WLAN	None			
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Modem	None			
Security chip	Trusted Platform Module (TPM 1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	280 watts, manual switch			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 27.5 lb (12.5 kg) in maximum configuration● Toolless cover removal, toolless adapter retention● Toolless disk, optical drive removal			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader* Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk*			
Slot	*bay only available on models with HDD/SSD/reader installed Slot 1: half-length, full-height, PCI Express 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			



See footnotes for important warranty information
US model(s) announced October 1, 2013 or April 8, 2014

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ThinkCentre M78 Small (10BT) - 1-year onsite

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	PS/2 port	2nd Serial	Floor stand	DP to Cable	Preload	Ann date (mm/dd/yy)
10BT0004US	4x3	A8-5500B	8GBx1	1TB 7200	DVD±RW	None	Media	HD 8570	None	None	Serial	Stand	Cable	Win7 Pro64 (DG)	10/01/13
10BT0005US	4x3	A4-5300	4GBx1	500G 7200	DVD±RW	None	None	HD 7480D	None	None	Serial	Stand	None	Win7 Pro64 (DG)	10/01/13
10BT0006US	4x3	A6-5400B	4GBx1	500G 7200	DVD±RW	N105	Media	HD 7540D	None	None	Serial	Stand	None	Win7 Pro64 (DG)	10/01/13

● 1-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability AMD APU A4-5300 (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon™ HD 7480D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A6-5400B (dual-core, 3.6GHz, 1MB L2 cache), Turbo Core (up to 3.8GHz), AMD Radeon HD 7540D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A8-5500B (quad-core, 3.2GHz, 4MB L2 cache), Turbo Core (up to 3.7GHz), AMD Radeon HD 7560D Graphics, DDR3 memory controller (up to 1866MHz)	
Implementation	Processor in Socket FM2	
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets	
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA) @60Hz; 2560x2048 (DisplayPort) @60Hz <i>Some:</i> AMD Radeon™ HD 8570 , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution:</i> 4096x2160 (HDMI) @24Hz; 2048x1536 (VGA) @85Hz <i>Some:</i> DisplayPort to DisplayPort monitor cable	
DP cable	<i>Some:</i> DisplayPort to DisplayPort monitor cable	
Disk	SATA 6.0Gb/s 7200 rpm	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1	
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar	
eSATA port	None	
Media reader	<i>Some:</i> 29-in-1 media reader, internal USB 2.0	
Chipset	AMD A75 Chipset	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, Intel Centrino® Wireless-N 105, 1x1	
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
IEEE 1394	None	
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®	
Modem	None	
Security chip	Trusted Platform Module (TPM 1.2-compliant)	
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo	
Floor Stand	System floor stand for vertical orientation	
Power supply	240 watts, autosensing	
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 15.0" D X 3.9" H• 339mm W X 381mm D X 100mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention	
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader	
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3	
<div><div>disk</div><div>optical</div><div></div></div>		
Limited Warranty	1-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	

Preloaded operating system	
Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit	
Ready to install applications (only some listed)	
<ul style="list-style-type: none">• Rescue and Recovery™• Password Manager	
Preloaded applications (only some listed)	
<ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• ThinkVantage Power Manager• View Management Utility• PC Device Stage• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Evernote®• Microsoft® Office preloaded; purchase a product key to activate• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Nitro Pro	
Security	
<ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Cable lock• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement• <i>Chassis intrusion switch on selected model(s)</i>	
RoHS-compliant	
Supports ThinkVantage Technologies	
For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	

Preloaded operating system

Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit

Ready to install applications (only some listed)

- Rescue and Recovery™
- Password Manager

Preloaded applications (only some listed)

- ThinkVantage® Product Recovery
- ThinkVantage System Update
- ThinkVantage Communication Utility
- ThinkVantage Power Manager
- View Management Utility
- PC Device Stage
- Lenovo Cloud Storage by SugarSync
- Lenovo Solution Center
- Lenovo Message Center Plus
- Norton™ Internet Security (30 days of virus definitions)
- Adobe® Reader®
- Skype™
- Evernote®
- Microsoft® Office preloaded; purchase a product key to activate
- Cyberlink Power2Go (DVD±RW)
- Cyberlink PowerProducer (DVD±RW)
- Nitro Pro

Security

- Security chip (see information on left)
- Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
- Cable lock
- Power-on password
- Administrator password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement
- Chassis intrusion switch on selected model(s)

RoHS-compliant

Supports ThinkVantage Technologies

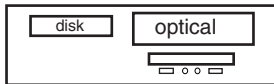
For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre M78 Small (10BT)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis intrusion switch	PS/2 port	Floor stand	DP to DP Cable	Global	Preload	Ann date (mm/dd/yy)
10BT0000US	4x3	A4-5300B	4GBx1	500G 7200	DVD±RW	None	None	HD 7480D	Switch	None	Stand	None	None	Win7 Pro64	10/01/13
10BT0008US	4x3	A4-6300B	4GBx1	500G 7200	DVD±RW	None	None	HD 8370D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BT0009US	4x3	A6-6400B	4GBx1	500G 7200	DVD±RW	None	None	HD 8470D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BT000AUS	4x3	A8-6500B	4GBx1	500G 7200	DVD±RW	None	None	HD 8570D	None	None	Stand	None	None	Win7 Pro64 (DG)	10/01/13
10BT000BUS	4x3	A6-6400B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Stand	Cable	None	Win7 Pro64 (DG)	10/01/13
10BT000CUS	4x3	A8-6500B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Stand	Cable	None	Win7 Pro64 (DG)	10/01/13

●3-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability AMD APU A4-5300B (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon™ HD 7480D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A4-6300B (dual-core, 3.7GHz, 1MB L2 cache), Turbo Core (up to 3.9GHz), AMD Radeon HD 8370D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A6-6400B (dual-core, 3.9GHz, 1MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8470D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A8-6500B (quad-core, 3.5GHz, 4MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8570D Graphics, DDR3 memory controller (up to 1866MHz) Processor in Socket FM2		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• ThinkVantage Power Manager• View Management Utility• PC Device Stage• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Evernote®• Microsoft® Office preloaded; purchase a product key to activate• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Nitro Pro	
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets			
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA) @60Hz; 2560x2048 (DisplayPort) @60Hz <i>Some:</i> AMD Radeon™ HD 8570 , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution:</i> 4096x2160 (HDMI) @24Hz; 2048x1536 (VGA) @85Hz <i>Some:</i> DisplayPort to DisplayPort monitor cable			
DP cable	<i>Some:</i> DisplayPort to DisplayPort monitor cable			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD A75 Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
PCIe WLAN	None			
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Modem	None			
Security chip	Trusted Platform Module (TPM 1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 15.0" D X 3.9" H• 339mm W X 381mm D X 100mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Cable lock• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement• Chassis intrusion switch on selected model(s) RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
US model(s) announced October 1, 2013

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(ADR1S-3) October 2013

ThinkCentre M78 Small (10BS) - ES 5.2

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	PS/2 port	2nd Serial / Parallel	Floor stand	DP to DP Cable	Preload	Ann date (mm/dd/yy)
10BS0002US	4x3	A8-6500B	4GBx1	1TB 7200	DVD±RW	N2230	None	HD 8570	Switch	None	S P	Stand	Cable	Win8 Pro64	10/01/13

●3-year limited warranty

Positioning	Mainstream enterprise stability and manageability		<div>Preloaded operating system</div> <div>Windows® 8 Pro 64-bit</div> <div>Ready to install applications (only some listed)</div> <div><ul style="list-style-type: none">● Password Manager</div> <div>Preloaded applications (only some listed)</div> <div><ul style="list-style-type: none">● ThinkVantage® System Update● View Management Utility● Lenovo® Support● Lenovo Companion● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Desktop Power Manager● PC Device Stage● Microsoft® Office preloaded; purchase a product key to activate● Norton™ Internet Security (30 days of virus definitions)● PC Device Stage● Evernote®● Skype™● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Nitro Pro● AccuWeather● Norton Studio</div> <div>Security</div> <div><ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Cable lock● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● Chassis intrusion switch on selected model(s)</div> <div>EPEAT™ Gold rating</div> <div>ENERGY STAR 5.2-compliant</div> <div>ULE Gold</div> <div>RoHS-compliant</div> <div>Supports ThinkVantage Technologies</div> <div>For compatible accessories, please go to TC-AQP sheet;</div> <div>For Lenovo service upgrade options, please go to S-TC sheet</div>
Processor	AMD APU A8-6500B (quad-core, 3.5GHz, 4MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon™ HD 8570D Graphics, DDR3 memory controller (up to 1866MHz)		
Implementation	Processor in Socket FM2		
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3, four 240-pin DIMM sockets		
Graphics	AMD Radeon HD Graphics, integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; Maximum resolution: 1920x1200 (VGA) @60Hz; 2560x2048 (DisplayPort) @60Hz Some: AMD Radeon™ HD 8570, DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; Max resolution: 4096x2160 (HDMI) @24Hz; 2048x1536 (VGA) @85Hz		
DP cable	Some: DisplayPort to DisplayPort monitor cable		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	AMD A75 Chipset		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
PCIe WLAN	Some: 11b/g/n wireless, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth 4.0 combo adapter, 2x2		
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Modem	None		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 15.0" D X 3.9" H● 339mm W X 381mm D X 100mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
<div><div>disk</div><div>optical</div><div></div></div>			
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
 US model(s) announced October 1, 2013

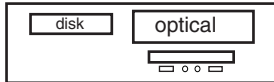
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ThinkCentre M78 Small (10BS) - ES 5.2 (GMP)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis Intrusion switch	PS/2 port	Floor stand	DP to DP Cable	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10BS0005US	4x3	A8-5500B	4GBx1	1TB 7200	DVD±RW	N105	None	HD 8470	Switch	None	Stand	None	G P	Win7 Pro64 (DG)	10/01/13
10BS0006US	4x3	A6-5400B	4GBx1	500G 7200	DVD±RW	None	None	HD 7540D	Switch	None	Stand	None	G P	Win7 Pro64 (DG)	10/01/13
10BS0007US	4x3	A4-5300B	2GBx1	500G 7200	DVD	None	None	HD 7480D	Switch	None	Stand	None	G P	Win7 Pro64	10/01/13

•Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability AMD APU A4-5300B (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon™ HD 7480D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A6-5400B (dual-core, 3.6GHz, 1MB L2 cache), Turbo Core (up to 3.8GHz), AMD Radeon HD 7540D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A8-5500B (quad-core, 3.2GHz, 4MB L2 cache), Turbo Core (up to 3.7GHz), AMD Radeon HD 7560D Graphics, DDR3 memory controller (up to 1866MHz) Processor in Socket FM2		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• ThinkVantage Power Manager• View Management Utility• PC Device Stage• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Evernote®• Microsoft® Office preloaded; purchase a product key to activate• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Nitro Pro	
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Cable lock• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement• <i>Chassis intrusion switch on selected model(s)</i> EPEAT™ Gold rating ENERGY STAR 5.2-compliant ULE Gold RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA) @60Hz; 2560x2048 (DisplayPort) @60Hz <i>Some:</i> AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz			
DP cable	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD A75 Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, Intel Centrino® Wireless-N 105, 1x1			
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Modem	None			
Security chip	Trusted Platform Module (TPM 1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 15.0" D X 3.9" H• 339mm W X 381mm D X 100mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

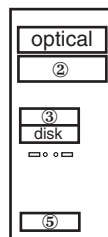
See footnotes for important warranty information
US model(s) announced October 1, 2013

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Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis intrusion switch	PS/2 port	DP to DP Cable	Global	Preload	Ann date (mm/dd/yy)
10BQ0000US	4x5	A4-5300B	4Gx1+2Gx3	500G Hybrid	DVD±RW	None	None	HD 7480D	Switch	None	None	None	Win7 Pro64	10/01/13
10BQ0004US	4x5	A4-5300	4GBx1	500G 7200	DVD±RW	None	None	HD 7540D	None	None	None	None	Win7 Pro64 (DG)	10/01/13
10BQ0005US	4x5	A6-5400B	4GBx1	500G 7200	DVD±RW	None	None	HD 7540D	None	None	None	None	Win7 Pro64 (DG)	10/01/13
10BQ0006US	4x5	A8-5500B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	None	None	Win7 Pro64 (DG)	10/01/13
10BQ0008US	4x5	A4-6300B	4GBx1	500G 7200	DVD±RW	None	None	HD 8370D	None	None	None	None	Win7 Pro64 (DG)	10/01/13
10BQ0009US	4x5	A6-6400B	4GBx1	500G 7200	DVD±RW	None	None	HD 8470D	None	None	None	None	Win7 Pro64 (DG)	10/01/13

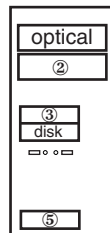
•3-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability AMD APU A4-5300 (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon™ HD 7480D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A4-5300B (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon HD 7480D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A4-6300B (dual-core, 3.7GHz, 1MB L2 cache), Turbo Core (up to 3.9GHz), AMD Radeon HD 8370D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A6-5400B (dual-core, 3.6GHz, 1MB L2 cache), Turbo Core (up to 3.8GHz), AMD Radeon HD 7540D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A6-6400B (dual-core, 3.9GHz, 1MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8470D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A8-5500B (quad-core, 3.2GHz, 4MB L2 cache), Turbo Core (up to 3.7GHz), AMD Radeon HD 7560D Graphics, DDR3 memory controller (up to 1866MHz)										Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Power Manager • View Management Utility • PC Device Stage • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Evernote® • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Nitro Pro				
Implementation	Processor in Socket FM2														
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets														
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA) @60Hz; 2560x2048 (DisplayPort) @60Hz <i>Some:</i> AMD Radeon™ HD 8570 , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution:</i> 4096x2160 (HDMI) @24Hz; 2048x1536 (VGA) @85Hz														
DP cable	None														
Disk	<i>Some:</i> SATA 6.0Gb/s 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	AMD A75 Chipset														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
PCIe WLAN	None														
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®														
Modem	None														
Security chip	Trusted Platform Module (TPM 1.2-compliant)														
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Power supply	280 watts, manual switch														
Machine	• Business black color; metal case • 6.9" W X 17.4" D X 16.3" H • 175mm W X 442mm D X 414mm H • 27.5 lb (12.5 kg) in maximum configuration • Toolless cover removal, toolless adapter retention • Toolless disk, optical drive removal														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader* Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk* *bay only available on models with HDD/SSD/reader installed														
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3														
Limited Warranty	3-years, limited onsite service. 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														



Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis intrusion switch	PS/2 port	DP to DP Cable	Global	Preload	Ann date (mm/dd/yy)
10BQ000AUS	4x5	A8-6500B	4GBx1	500G 7200	DVD±RW	None	None	HD 8570D	None	None	None	None	Win7 Pro64 (DG)	10/01/13
10BQ000BUS	4x5	A8-6500B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Cable	None	Win7 Pro64 (DG)	10/01/13
10BQ000CUS	4x5	A4-6300B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Cable	None	Win7 Pro64 (DG)	10/01/13
10BQ000DUS	4x5	A6-6400B	8GBx1	1TB 7200	DVD±RW	None	None	HD 8570	None	None	Cable	None	Win7 Pro64 (DG)	10/01/13

• 3-year limited warranty

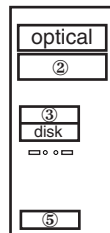
Positioning Processor	<i>Mainstream enterprise stability and manageability</i> AMD APU A4-6300B (dual-core, 3.7GHz, 1MB L2 cache), Turbo Core (up to 3.9GHz), AMD Radeon™ HD 8370D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A6-6400B (dual-core, 3.9GHz, 1MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8470D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A8-6500B (quad-core, 3.5GHz, 4MB L2 cache), Turbo Core (up to 4.1GHz), AMD Radeon HD 8570D Graphics, DDR3 memory controller (up to 1866MHz) Processor in Socket FM2		Preloaded operating system Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• ThinkVantage Power Manager• View Management Utility• PC Device Stage• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Evernote®• Microsoft® Office preloaded; purchase a product key to activate• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Nitro Pro	
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets			
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA)@60Hz; 2560x2048 (DisplayPort)@60Hz <i>Some:</i> AMD Radeon™ HD 8570 , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution:</i> 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> DisplayPort to DisplayPort monitor cable			
DP cable	<i>Some:</i> DisplayPort to DisplayPort monitor cable			
Disk	<i>Some:</i> SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD A75 Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
PCIe WLAN	None			
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Modem	None			
Security chip	Trusted Platform Module (TPM 1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	280 watts, manual switch			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 27.5 lb (12.5 kg) in maximum configuration• Toolless cover removal, toolless adapter retention• Toolless disk, optical drive removal			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader* Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk* *bay only available on models with HDD/SSD/reader installed			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Cable lock• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement• Chassis intrusion switch on selected model(s) RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	

ThinkCentre M78 Tower (10BN) - ES 5.2 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory*	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis intrusion switch	PS/2 port	2nd Serial / Parallel	DP to DP Cable	DP to DVI Dongle	Preload	Ann date (mm/dd/yy)
10BN0001US	4x5	A8-5500B	4Gx1+2Gx3	1TB 7200	DVD±RW	N2230	None	HD 8470	Switch	None	S P	Cable	Dongle	Win8 Pro64	10/01/13

●3-year limited warranty

Positioning	Mainstream enterprise stability and manageability										Preloaded operating system									
Processor	AMD APU A8-5500B (quad-core, 3.2GHz, 4MB L2 cache), Turbo Core (up to 3.7GHz), AMD Radeon™ HD 7560D Graphics, DDR3 memory controller (up to 1866MHz) Processor in Socket FM2										Windows® 8 Pro 64-bit									
Implementation											Ready to install applications (only some listed)									
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets										● Password Manager									
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA) @60Hz; 2560x2048 (DisplayPort) @60Hz <i>Some:</i> AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz										Preloaded applications (only some listed)									
DP cable	<i>Some:</i> DisplayPort to DisplayPort monitor cable										● ThinkVantage® System Update									
DP dongle	<i>Some:</i> DisplayPort to DVI-D cable										● View Management Utility									
Disk	<i>Some:</i> SATA 6.0Gb/s 7200 rpm										● Lenovo® Support									
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										● Lenovo Companion									
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1										● Lenovo Cloud Storage by SugarSync									
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar										● Lenovo Solution Center									
eSATA port	None										● Desktop Power Manager									
Media reader	None										● PC Device Stage									
Chipset	AMD A75 Chipset										● Microsoft® Office preloaded; purchase a product key to activate									
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										● Norton™ Internet Security (30 days of virus definitions)									
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)										● PC Device Stage									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										● Evernote®									
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth 4.0 combo adapter, 2x2										● Skype™									
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)										● Cyberlink PowerDVD (DVD±RW, DVD)									
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										● Cyberlink Power2Go (DVD±RW)									
Speaker	Internal speaker for business audio										● Cyberlink PowerProducer (DVD±RW)									
IEEE 1394	None										● Nitro Pro									
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®										● AccuWeather									
Modem	None										● Norton Studio									
Security chip	Trusted Platform Module (TPM 1.2-compliant)																			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo																			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo																			
Power supply	280 watts, autosensing, 85% PSU																			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 27.5 lb (12.5 kg) in maximum configuration● Toolless cover removal, toolless adapter retention● Toolless disk, optical drive removal																			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader* Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk* *bay only available on models with HDD/SSD/reader installed																			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																			
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										Security									
											<ul style="list-style-type: none">● Security chip (see information on left)● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Cable lock● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● Chassis intrusion switch on selected model(s)									
											EPEAT™ Gold rating ENERGY STAR 5.2-compliant ULE Gold RoHS-compliant									
											Supports ThinkVantage Technologies									
											For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet									

See footnotes for important warranty information
US model(s) announced October 1, 2013

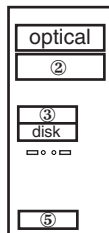
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ThinkCentre M78 Tower (10BN) - ES 5.2 (GMP)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Chassis intrusion switch	PS/2 port	DP to DP Cable	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10BN0005US	4x5	A4-5300B	2GBx1	500G 7200	DVD	None	None	HD 7480D	Switch	None	None	G P	Win7 Pro64	10/01/13
10BN0006US	4x5	A8-5500B	4GBx1	1TB 7200	DVD±RW	N105	None	HD 8470	Switch	None	None	G P	Win7 Pro64 (DG)	10/01/13
10BN0007US	4x5	A6-5400B	4GBx1	500G 7200	DVD±RW	None	None	HD 7540D	Switch	None	None	G P	Win7 Pro64 (DG)	10/01/13

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> AMD APU A4-5300B (dual-core, 3.4GHz, 1MB L2 cache), Turbo Core (up to 3.6GHz), AMD Radeon™ HD 7480D Graphics, DDR3 memory controller (up to 1600MHz) AMD APU A6-5400B (dual-core, 3.6GHz, 1MB L2 cache), Turbo Core (up to 3.8GHz), AMD Radeon HD 7540D Graphics, DDR3 memory controller (up to 1866MHz) AMD APU A8-5500B (quad-core, 3.2GHz, 4MB L2 cache), Turbo Core (up to 3.7GHz), AMD Radeon HD 7560D Graphics, DDR3 memory controller (up to 1866MHz) Processor in Socket FM2		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit	
Implementation	Processor in Socket FM2		Ready to install applications (only some listed)	
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		<ul style="list-style-type: none">● Rescue and Recovery™● Password Manager	
Graphics	AMD Radeon HD Graphics , integrated in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, supports dual independent display, works along with optional discrete graphics to support up to four independent monitors; <i>Maximum resolution:</i> 1920x1200 (VGA)@60Hz; 2560x2048 (DisplayPort)@60Hz <i>Some:</i> AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz		Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Power Manager● View Management Utility● PC Device Stage● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Evernote®● Microsoft® Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Nitro Pro	
DP cable	None			
Disk	<i>Some:</i> SATA 6.0Gb/s 7200 rpm			
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
Onboard SATA	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD A75 Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort, optional keyboard (PS/2), optional mouse (PS/2)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, Intel Centrino® Wireless-N 105, 1x1			
Internal connector	Two USB 2.0 planar conn (1 used; one open for additional USB device)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Modem	None			
Security chip	Trusted Platform Module (TPM 1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	280 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 27.5 lb (12.5 kg) in maximum configuration● Toolless cover removal, toolless adapter retention● Toolless disk, optical drive removal			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader* Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk* *bay only available on models with HDD/SSD/reader installed			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● Security chip (see information on left)● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Cable lock● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● Chassis intrusion switch on selected model(s)	
			EPEAT™ Gold rating ENERGY STAR 5.2-compliant ULE Gold RoHS-compliant	
			Supports ThinkVantage Technologies	
			For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
US model(s) announced October 1, 2013

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(ADR1T-5) October 2013

Memory

2GB PC3-12800 DDR3 UDIMM	0A65728	ann	06/05/12
4GB PC3-12800 DDR3 UDIMM	0A65729	ann	06/05/12
8GB PC3-12800 DDR3 UDIMM	0A65730	ann	06/05/12

More information at

www.lenovo.com/support/desktopmemorycompatibility

Optical

Lenovo® Super Multi-Burner SATA Drive	0A65618	ann	08/23/11
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Storage and removable storage

500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann	11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann	08/19/08

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Graphics

Small 5100/4865/2113/2114 support Low Profile:

NVIDIA NVS 510 2GB Graphics Card by Lenovo ⁶⁷	0B47077	ann	01/29/13
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Tower 2111/1766/1562/1565 support 75 watts max:

NVIDIA NVS 510 2GB Graphics Card by Lenovo ⁶⁷	0B47077	ann	01/29/13
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⁶⁷ Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.

More information at www.lenovo.com/support/graphiccards

Keyboard

Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultralim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at www.lenovo.com/support/keyboards

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
Lenovo Wireless Laser Mouse ⁶²	0A36188	ann	12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09

More information at www.lenovo.com/support/mice

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Multimedia

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Speakers M0520 (black)	57Y6360	ann	02/08/11
Lenovo Speakers M0520 (red)	57Y6361	ann	02/08/11
Lenovo Headset P550	55Y2065		
Lenovo Headset P950 (black)	57Y6605	ann	02/08/11

⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann	09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2323p Wide 23" (VGA, DP, DVI-D) ⁶⁹	3024HC1	ann	05/01/12

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

DisplayPort™ to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
Lenovo USB Soundbar	0A36190	ann	05/01/12
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann	09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann	08/24/10
ThinkCentre Extend Arm	57Y4352	ann	07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkCentre M83 Small Pro, Mini Tower

ThinkCentre®



Lenovo ThinkCentre M83 Mini Tower
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M83 Mini Tower
with optional WLAN and graphic card



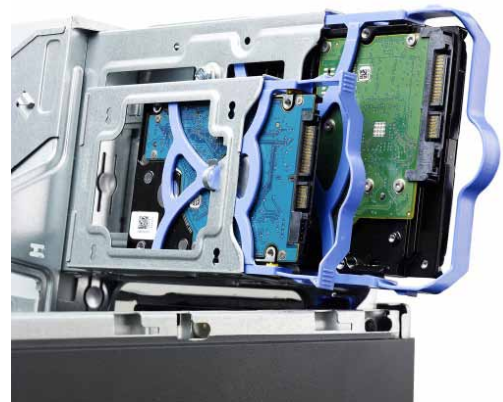
Lenovo ThinkCentre M83 Small Pro
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M83 Small Pro
with optional dual graphic cards
* Cable lock only available on some special bid
models



Lenovo ThinkCentre M83 Small Pro
(inside view)



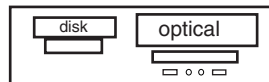
Optional 2.5" bay on
Lenovo ThinkCentre M83 Small Pro
* Come with optional 2.5" 2nd HDD

ThinkCentre M83 SFF Pro (10AM) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-cessor	Memory ^a	SATA disk GB rpm	2nd disk	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Parallel port	Chassis intrusion switch	Floor stand	ENERGY STAR 5.2	Preload	Ann date (mm/dd/yy)
10AM0002US	3x4	i5-4670	4GBx1	1TB 7200		None		HD 4600	USB	None	None	None	None	None	Win7 Pro64 (DG)	07/30/13
10AM0003US	3x4	i5-4570	4GBx1	500G 7200		None		HD 4600	None	None	None	None	None	None	Win7 Pro64 (DG)	07/30/13
10AM0004US	3x4	i7-4770	8GBx1	1TB 7200		Intel 105		GT 620	USB	Serial	Parallel	None	Stand	None	Win7 Pro64 (DG)	07/30/13
10AM0005US	3x4	i5-4570	8GBx1	1TB 7200		Intel 105		GT 620	USB	Serial	Parallel	None	Stand	None	Win7 Pro64 (DG)	07/30/13
10AM0006US	3x4	i7-4770	4GBx1	500G 7200		None		HD 4600	None	None	None	None	Stand	None	Win7 Pro64 (DG)	07/30/13
10AM0007US	3x4	i5-4570	4GBx1	500G 7200		None		HD 4600	None	None	None	None	Stand	None	Win7 Pro64 (DG)	07/30/13
10AM000AUS	3x4	i7-4770	4GBx1	1TB 7200		None		HD 4600	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/20/13
10AM000BUS	3x4	i5-4570	4GBx1	128G SSD	1TB	None	Media	HD 4600	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/20/13
10AM0009US	3x4	i3-4130	4GBx1	500G 7200		None		HD 4400	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/20/13
10AM000CUS	3x4	i3-4130	4GBx1	500G Hybrid		None		HD 4400	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/20/13

Positioning	Mainstream enterprise stability and manageability		Preloaded operating system
Processor	Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		Ready to install applications (only some listed)
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		Rescue and Recovery™ Password Manager
Graphics	Intel HD Graphics 4400 or 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: NVIDIA® GeForce® GT 620 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz		Preloaded applications (only some listed)
DP dongle	None		ThinkVantage® Product Recovery ThinkVantage System Update ThinkVantage Communication Utility Desktop Power Manager View Management Utility Lenovo Cloud Storage by SugarSync Lenovo Solution Center Lenovo Message Center Plus Norton™ Internet Security (30 days of virus definitions) Adobe® Reader® Skype™ Microsoft Office preloaded; purchase a product key to activate Cyberlink PowerDVD (DVD±RW, DVD) Cyberlink Power2Go (DVD±RW) Cyberlink PowerProducer (DVD±RW) Evernote Intel AppUp Intel Small Business Advantage Nitro Pro
Disk	Some: SATA 6.0Gb/s, 7200 rpm, 3.5" wide Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide		
2nd disk	Some: SATA 6.0Gb/s, 7200 rpm, 3.5" wide		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset		
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	Some: 29-in-1 media reader, internal USB 2.0		
Chipset	Intel Q85 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Manageability	Intel Standard Manageability		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		Security
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		Security chip (see information on left) One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable)
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		Power-on password Administrator password Hard disk password Boot sequence control Boot without keyboard and mouse Serial port I/O control Individual USB port disablement Chassis intrusion switch on selected model(s)
Floor Stand	Optional system floor stand for vertical orientation		
Power supply	240 watts, autosensing		
Machine	● SFF Pro (12.9L), business black color; metal case ● (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm ● 17.20 lb (7.8 kg) in maximum configuration ● Toolless cover removal, adapter retention ● Toolless disk and optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 3: 2.5", N/A, internal, opt or come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max)		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies



- Security**
- Security chip (see information on left)
 - One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
 - Power-on password
 - Administrator password
 - Hard disk password
 - Boot sequence control
 - Boot without keyboard and mouse
 - Serial port I/O control
 - Individual USB port disablement
 - Chassis intrusion switch on selected model(s)

ULE Gold
 Cisco EnergyWise compatible
 GREENGUARD® certified
 RoHS-compliant

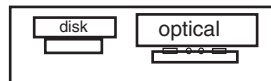
Supports ThinkVantage Technologies

For compatible accessories, please go to TC-AQP sheet;
 For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre M83 SFF Pro (10AM) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ^a	SATA disk	Optional 2.5" Bay	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Parallel port	Chassis intrusion switch	Floor stand	ENERGY STAR 5.2	Preload	Ann date (mm/dd/yy)
10AM000JUS	3x4	i3-4130	4GBx1	500G 3.5"	2.5" bay	None	None	HD 7450	USB	None	None	None	Stand	None	Win7 P64 DG Win8.1	02/04/14
10AM000KUS	3x4	i5-4570	4GBx1	500G 3.5"	2.5" bay	None	None	HD 7450	USB	None	None	None	Stand	None	Win7 P64 DG Win8.1	02/04/14
10AM000LUS	3x4	i7-4770	4GBx1	500G 3.5"	2.5" bay	None	None	HD 7450	USB	None	None	None	Stand	None	Win7 P64 DG Win8.1	02/04/14
10AM000MUS	3x4	i7-4770	8GBx1	1TB Hybrid	2.5" bay	None	None	HD 7450	USB	None	None	None	Stand	None	Win7 P64 DG Win8.1	02/04/14
10AM000NUS	3x4	G3220	4GBx1	500G 3.5"	2.5" bay	None	None	HD 7450	USB	None	None	None	Stand	None	Win7 P64 DG Win8.1	02/04/14
10AM000PUS	3x4	i3-4130	4GBx1	500G 2.5"	2.5" bay	None	None	HD 4400	None	None	None	None	None	None	Win7 P64 DG Win8.1	02/25/14
10AM000QUS	3x4	i5-4570	4GBx1	500G 2.5"	2.5" bay	None	None	HD 4600	None	None	None	None	None	None	Win7 P64 DG Win8.1	02/25/14
10AM000RUS	3x4	i5-4670	4GBx1	1TB 3.5"	2.5" bay	None	None	HD 4600	None	None	None	None	None	None	Win7 P64 DG Win8.1	02/25/14
10AM000SUS	3x4	i7-4770	4GBx1	1TB 3.5"	2.5" bay	None	None	HD 4600	None	None	None	None	None	None	Win7 P64 DG Win8.1	02/25/14
10AM000TUS	3x4	i3-4130	4GBx1	500G 3.5"	2.5" bay	None	None	HD 4400	None	None	None	None	Stand	None	Win7 P64 DG Win8.1	04/01/14
Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket													Preloaded operating system Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Intel Small Business Advantage ● Nitro Pro		
Implementation																
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3, four 240-pin DIMM sockets															
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Max resolution: 2560x1600 (DP)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: AMD Radeon™ HD 7450, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Max resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz															
DP dongle	None															
Disk	Some: SATA 6.0Gb/s, 7200 rpm, 2.5" wide Some: SATA 6.0Gb/s, 7200 rpm, 3.5" wide Some: 1TB (7200 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 3.5" wide															
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset															
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)															
eSATA port	None															
Media reader	None															
Chipset	Intel Q85 Express Chipset															
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
PCIe WLAN	None															
Bluetooth	None															
Audio	High Definition (HD) Audio, Realtek® ALC662 codec															
Speaker	Internal speaker for business audio (1 watt)															
IEEE 1394	None															
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®															
Manageability	Intel Standard Manageability															
Modem	None															
Security chip	Trusted Platform Module (TPM1.2-compliant)															
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo															
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo															
Floor Stand	Optional system floor stand for vertical orientation															
Power supply	240 watts, autosensing															
Machine	● SFF Pro (12.9L), business black color; metal case ● (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm ● 17.20 lb (7.8 kg) in maximum configuration ● Toolless cover removal, adapter retention ● Toolless disk and optical drive removal															
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 3: 2.5", N/A, internal, opt or come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader															
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max)															
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available															



- Security**
- Security chip (see information on left)
 - One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
 - Power-on password
 - Administrator password
 - Hard disk password
 - Boot sequence control
 - Boot without keyboard and mouse
 - Serial port I/O control
 - Individual USB port disablement
 - Chassis intrusion switch on selected model(s)

ULE Gold
Cisco EnergyWise compatible
GREENGUARD® certified
RoHS-compliant

Supports ThinkVantage Technologies

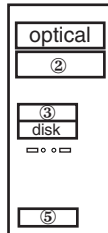
For compatible accessories, please go to TC-AQP sheet;
For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre M83 Mini Tower (10AL) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Parallel port	Chassis intrusion switch	ENERGY STAR 5.2	Preload	Ann date (mm/dd/yy)
10AL0008US	3x5	i5-4670	4GBx1	1TB 7200	DVD±RW	None	None	HD 4600	USB	None	None	None	None	Win7 Pro64 (DG)	07/30/13
10AL0009US	3x5	i5-4570	4GBx1	500GB 7200	DVD±RW	None	None	HD 4600	None	None	None	None	None	Win7 Pro64 (DG)	07/30/13
10AL000AUS	3x5	i7-4770	4GBx1	500GB 7200	DVD±RW	None	None	HD 4600	USB	None	None	None	None	Win7 Pro64 (DG)	07/30/13
10AL000BUS	3x5	i5-4670	4GBx1	500GB 7200	DVD±RW	None	None	HD 4600	USB	None	None	None	None	Win7 Pro64 (DG)	07/30/13
10AL000CUS	3x5	i5-4670	4GBx2	1TB 7200	DVD±RW	None	None	HD 4600	USB	Serial	Parallel	None	None	Win7 Pro64 (DG)	07/30/13
10AL000DUS	3x5	i5-4670	4GBx1	500GB 7200	DVD±RW	None	None	HD 8470	USB	Serial	Parallel	None	None	Win7 Pro64 (DG)	07/30/13
10AL000EUS	3x5	i7-4770	4GBx2	1TB 7200	DVD±RW	None	None	GT 620	USB	Serial	Parallel	None	None	Win7 Pro64 (DG)	07/30/13
10AL000FUS	3x5	i7-4770	4GBx2	500GB 7200	DVD±RW	None	None	HD 8570	USB	Serial	Parallel	None	None	Win7 Pro64 (DG)	07/30/13
10AL000GUS	3x5	i7-4770	4GBx1	1TB 7200	DVD±RW	None	None	HD 4600	None	None	None	None	None	Win7 Pro64 (DG)	08/20/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Mainstream enterprise stability and manageability											Preloaded operating system			
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit			
Implementation	Processor in LGA1150 socket											Ready to install applications (only some listed)			
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets											<ul style="list-style-type: none">• Rescue and Recovery™• Password Manager			
Graphics	Intel HD Graphics 4600 in processor, uses main memory, Direct [®] X 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i> <i>Some: AMD Radeon™ HD 8470, DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz</i> <i>Some: AMD Radeon HD 8570, DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; Max resolution: 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz</i> <i>Some: NVIDIA® GeForce® GT 620, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz</i>											Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro			
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset														
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)														
eSATA port	None														
Media reader	None														
Chipset	Intel Q85 Express Chipset														
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
PCIe WLAN	None														
Bluetooth	None														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio (1.5 watt)														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®														
Manageability	Intel Standard Manageability														
Modem	None														
Security chip	Trusted Platform Module (TPM1.2-compliant)											Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• Chassis intrusion switch on selected model(s)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Power supply	280 watts, autosensing														
Machine	<ul style="list-style-type: none">• Mini Tower (25L), business black color, metal case• (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm• 24.69 lb (11.20 kg) in maximum configuration• Toolless cover removal, adapter retention• Toolless disk, optical drive removal														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk														
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max)														
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														

Security
 • Security chip (see information on left)
 • One lock to secure both cover and entire system to fixed object:
 -Padlock loop (in rear for opt padlock)
 -Security slot (in rear for optional Kensington® MicroSaver® cable)
 • Power-on password
 • Administrator password
 • Hard disk password
 • Boot sequence control
 • Boot without keyboard and mouse
 • Serial port I/O control
 • Individual USB port disablement
 • Chassis intrusion switch on selected model(s)

ULE Gold
 Cisco EnergyWise compatible
 GREENGUARD® certified
 RoHS-compliant
 Supports ThinkVantage Technologies

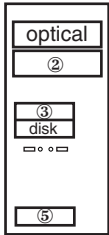
For compatible accessories, please go to TC-AQP sheet;
 For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre M83 Mini Tower (10AL) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Parallel port	Chassis intrusion switch	ENERGY STAR 5.2	Preload	Ann date (mm/dd/yy)
10AL000QUS	3x5	i5-4570	4GBx1	500GB 7200	DVD±RW	None	None	HD 7450	USB	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10AL000RUS	3x5	i7-4770	8GBx1	500GB 7200	DVD±RW	None	None	HD 7450	USB	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10AL000SUS	3x5	i7-4770	8GBx1	1TB 7200	DVD±RW	None	None	HD 7450	USB	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10AL000TUS	3x5	i7-4770	8GBx1	1TB Hybrid	DVD±RW	None	None	HD 7450	USB	None	None	None	None	Win7 P64 DG Win8.1	02/04/14
10AL000UUS	3x5	i5-4570	4GBx1	500GB 7200	DVD±RW	None	None	HD 4600	None	None	None	None	None	Win7 P64 DG Win8.1	02/25/14
10AL000VUS	3x5	i7-4770	4GBx1	1TB 7200	DVD±RW	None	None	HD 4600	None	None	None	None	None	Win7 P64 DG Win8.1	02/25/14

•Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Mainstream enterprise stability and manageability										Preloaded operating system									
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller										Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit									
Implementation	Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket										Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit									
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3, four 240-pin DIMM sockets										Ready to install applications (only some listed)									
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: AMD Radeon™ HD 7450, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Max resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz										● Rescue and Recovery™ ● Password Manager									
DP dongle	None										Preloaded applications (only some listed)									
Disk	Some: SATA 6.0Gb/s 7200 rpm, 3.5" wide Some: 1TB (7200 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 3.5" wide										● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Intel Small Business Advantage ● Nitro Pro									
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset																			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)																			
eSATA port	None																			
Media reader	None																			
Chipset	Intel Q85 Express Chipset																			
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																			
PCIe WLAN	None																			
Bluetooth	None																			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																			
Speaker	Internal speaker for business audio (1.5 watt)																			
IEEE 1394	None																			
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®																			
Manageability	Intel Standard Manageability																			
Modem	None																			
Security chip	Trusted Platform Module (TPM1.2-compliant)										Security ● Security chip (see information on left) ● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement ● Chassis intrusion switch on selected model(s)									
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo																			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo																			
Power supply	280 watts, autosensing																			
Machine	● Mini Tower (25L), business black color, metal case ● (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm ● 24.69 lb (11.20 kg) in maximum configuration ● Toolless cover removal, adapter retention ● Toolless disk, optical drive removal																			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk																			
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max)										ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant									
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet									

See footnotes for important warranty information

US model(s) announced February 4, 2014 or February 25, 2014

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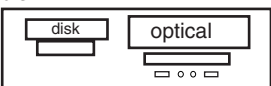
(MSK1T-6) February 2014

ThinkCentre M83 SFF Pro (10AN)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Parallel port	Chassis intrusion switch	Floor stand	ENERGY STAR 5.2	Preload	Ann date (mm/dd/yy)
10AN0006US	3x4	i5-4570	4GBx1	500G 7200 DVD±RW	None	Reader	HD 8470	None	None	None	None	None	Stand	None	Win7 Pro64 (DG)	07/30/13
10AN000GUS	3x4	i5-4570	4GBx1	500G 7200 DVD±RW	None	None	HD 4600	USB	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/27/13
10AN000HUS	3x4	i7-4770	4GBx1	500G 7200 DVD±RW	None	None	HD 4600	USB	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/27/13
10AN000JUS	3x4	i7-4770	8GBx1	1TB 7200 DVD±RW	None	None	HD 4600	USB	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/27/13
10AN000KUS	3x4	i5-4570	8GBx1	1TB 7200 DVD±RW	None	None	HD 8570	USB	None	None	None	None	Stand	None	Win7 Pro64 (DG)	08/27/13
10AN000XUS	3x4	i3-4130	4GBx1	500G 7200 DVD±RW	None	None	HD 4400	USB	None	None	None	None	Stand	None	Win7 Pro64 (DG)	10/22/13
10AN000YUS	3x4	i3-4130	8GBx1	1TB Hybrid DVD±RW	None	None	HD 8570	USB	None	None	None	None	Stand	None	Win7 Pro64 (DG)	10/22/13

•3-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro
Implementation			
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)</i> <i>Some: AMD Radeon™ HD 8470</i> , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz</i> <i>Some: AMD Radeon HD 8570</i> , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution: 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz</i>		
DP dongle	None		
Disk	<i>Some: SATA 6.0Gb/s 7200 rpm, 3.5" wide</i> <i>Some: 1TB (7200 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 3.5" wide</i>		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	<i>Some: 29-in-1 media reader, internal USB 2.0</i>		
Chipset	Intel Q85 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Manageability	Intel Standard Manageability		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
Power supply	240 watts, autosensing		
Machine	<ul style="list-style-type: none">• SFF Pro (12.9L), business black color; metal case• (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm• 17.20 lb (7.8 kg) in maximum configuration• Toolless cover removal, adapter retention• Toolless disk and optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 3: 2.5", N/A, internal, opt or come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max)		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• Chassis intrusion switch on selected model(s) ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US model(s) announced July 30, 2013, August 27, 2013, or October 22, 2013

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(MSK1S-4) October 2013

ThinkCentre M83 SFF Pro (10AH) - ES 5.2

Product Specifications Reference (PSREF)

Type-model	Slot x Pro- bay cessor	Memory ⁸	SATA disk GB rpm	SATA optical	Optional 2.5" Bay	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Floor stand	ENERGY STAR 5.2	Preload	Ann date (mm/dd/yy)
10AH000JUS	3x4	i5-4570	4GBx1	1TB 7200	DVD	Intel 105	None	HD 8470	USB	None	Switch	Stand	ES52	Win7 Pro64	07/30/13
10AH0042US	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	2.5" bay	None	None	HD 7450	USB	None	Stand	ES52	Win7 P64 DG Win8.1	02/04/14

●3-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro
Implementation	Processor in LGA1150 socket		
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> AMD Radeon™ HD 7450 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide		
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	None		
Chipset	Intel Q85 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Manageability	Intel Standard Manageability		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● SFF Pro (12.9L), business black color; metal case● (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm● 17.20 lb (7.8 kg) in maximum configuration● Toolless cover removal, adapter retention● Toolless disk and optical drive removal <div><div>disk</div><div>optical</div></div>		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 3: 2.5", N/A, internal, opt or come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max)		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information

US model(s) announced July 30, 2013 or February 4, 2014

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(MSK1S-1) February 2014

ThinkCentre M83 SFF Pro (10AH) - ES 5.2 (GMP)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Floor stand	ENERGY STAR 5.2	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AH0015US	3x4	i5-4570	2GBx1	500G 7200	DVD	None	HD 4600	None	None	Switch	None	ES52	G P	Win7 Pro64	07/30/13
10AH0016US	3x4	i5-4570	4GBx1	500G 7200	DVD	None	HD 4600	USB	None	Switch	Stand	ES52	G P	Win7 Pro64 (DG)	07/30/13
10AH0017US	3x4	i5-4570	4GBx1	1TB 7200	DVD	Intel 105	HD 8470	USB	None	Switch	Stand	ES52	G P	Win7 Pro64 (DG)	07/30/13
10AH001HUS	3x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	HD 4600	USB	None	Switch	Stand	ES52	G P	Win7 Pro64 (DG)	08/20/13
10AH001JUS	3x4	i5-4570	4GBx1	1TB 7200	DVD±RW	Intel 105	HD 8470	USB	None	Switch	Stand	ES52	G P	Win7 Pro64 (DG)	08/20/13
10AH0043US	3x4	i5-4570	2GBx1	500G 7200	DVD	None	HD 4600	None	None	Switch	None	ES52	G P	Win7 Pro64	03/11/14

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning	Mainstream enterprise stability and manageability		Preloaded operating system
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		Some: Windows® 7 Professional 64 Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz		Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Intel Small Business Advantage ● Nitro Pro
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide		Security ● Security chip (see information on left) ● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement ● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Optical	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	None		
Chipset	Intel Q85 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Manageability	Intel Standard Manageability		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	● SFF Pro (12.9L), business black color; metal case ● (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm ● 17.20 lb (7.8 kg) in maximum configuration ● Toolless cover removal, adapter retention ● Toolless disk and optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 3: 2.5", N/A, internal, opt or come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max)		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information

US model(s) announced July 30, 2013 or August 20, 2013 or March 11, 2014

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(MSK1S-2) March 2014

ThinkCentre M83 Mini Tower (10AK)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	ENERGY STAR 5.2	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AK0004US	3x5	i5-4570	8GBx1	500GB 7200	DVD±RW	None	None	GT 620	USB	None	None	None	None	Win7 P64 DG Win8	07/30/13
10AK0005US	3x5	i5-4570	4GBx1	500GB 7200	DVD±RW	None	None	HD 4600	None	None	None	None	None	Win7 P64 DG Win8	07/30/13
10AK0006US	3x5	i7-4770	8GBx1	500GB 7200	DVD±RW	None	None	GT 620	USB	None	None	None	None	Win7 P64 DG Win8	07/30/13
10AK0007US	3x5	i7-4770	8GBx1	500GB 7200	DVD±RW	None	None	HD 4600	None	None	None	None	None	Win7 P64 DG Win8	07/30/13
10AK000LUS	3x5	i3-4130	4GBx1	500GB 7200	DVD±RW	None	None	HD 4400	USB	None	None	None	None	Win7 P64 DG Win8	10/22/13
10AK000MUS	3x5	i3-4130	8GBx1	1TB Hybrid	DVD±RW	None	None	HD 8570	USB	None	None	None	None	Win7 P64 DG Win8	10/22/13
10AK000QUS	3x5	i5-4570	4GBx1	500GB 7200	DVD±RW	None	None	HD 7450	USB	None	None	None	None	Win7 P64 DG Win8.1	02/04/14

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller, Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller, Processor in LGA1150 socket											Preloaded operating system <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit			
Implementation Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets											Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager			
Graphics	Intel HD Graphics 4400/4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> NVIDIA® Geforce® GT 620 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> AMD Radeon HD 8570 , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution:</i> 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> AMD Radeon™ HD 7450 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz											Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Intel Small Business Advantage ● Nitro Pro			
DP dongle	None											Security ● Security chip (see information on left) ● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement ● Chassis intrusion switch on selected model(s) ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet			
Disk	<i>Some:</i> SATA 6.0Gb/s 7200 rpm, 3.5" wide <i>Some:</i> 1TB (7200 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 3.5" wide														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset														
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)														
eSATA port	None														
Media reader	None														
Chipset	Intel Q85 Express Chipset														
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
PCIe WLAN	None														
Bluetooth	None														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio (1.5 watt)														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®														
Manageability	Intel Standard Manageability														
Modem	None														
Security chip	Trusted Platform Module (TPM1.2-compliant)														
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo														
Power supply	280 watts, autosensing														
Machine	● Mini Tower (25L), business black color, metal case ● (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm ● 24.69 lb (11.20 kg) in maximum configuration ● Toolless cover removal, adapter retention ● Toolless disk, optical drive removal														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk														
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max)														
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														

optical

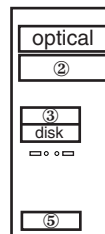
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disk

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See footnotes for important warranty information

US model(s) announced July 30, 2013, October 22, 2013, or February 4, 2014

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(MSK1T-3) February 2014

ThinkCentre M83 Mini Tower (10AG) - ES 5.2

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	ENERGY STAR 5.2 Global	Preload	Ann date (mm/dd/yy)
10AG0012US	3x5	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	USB	None	None	ES52	None	Win7 P64 DG Win8.1 02/04/14

●3-year limited warranty

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology		<div>Preloaded operating system</div> <div>Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit</div> <div>Ready to install applications (only some listed)</div> <div><ul style="list-style-type: none">● Password Manager</div> <div>Preloaded applications (only some listed)</div> <div><ul style="list-style-type: none">● Lenovo Support● Lenovo Companion● Lenovo Cloud Storage by SugarSync● Desktop Power Manager● Norton™ Studio● AccuWeather● Evernote®● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● ThinkVantage System Update● Lenovo Solution Center● Norton Internet Security (30 days of virus definitions)● Skype™● Intel AppUp● Intel Small Business Advantage● Nitro Pro</div>
Implementation	Processor in LGA1150 socket		
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking)</i> <i>Some: AMD Radeon™ HD 7450, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Max resolution: 2560x1600 (DisplayPort, DVI-I) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	None		
Chipset	Intel Q85 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Manageability	Intel Standard Manageability		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	280 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Mini Tower (25L), business black color, metal case● (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm● 24.69 lb (11.20 kg) in maximum configuration● Toolless cover removal, adapter retention● Toolless disk, optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk		
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max)		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced February 4, 2013

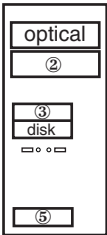
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ThinkCentre M83 Mini Tower (10AG) - ES 5.2 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Additional Front Graphics	2nd serial port	Chassis intrusion switch	ENERGY STAR 5.2	Global	Preload	Ann date (mm/dd/yy)
10AG000CUS	3x5	i5-4570	4GBx1	1TB 7200	DVD	Intel 105	None	HD 8470	USB	None	Switch	ES52	None	Win8 Pro64 07/30/13

●3-year limited warranty

Positioning	Mainstream enterprise stability and manageability										Preloaded operating system			
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket										Windows® 8 Pro 64-bit			
Implementation											Ready to install applications (only some listed)			
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets										● Password Manager			
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: AMD Radeon™ HD 8470, DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz										Preloaded applications (only some listed)			
DP dongle	None										● Lenovo Support ● Lenovo Companion ● Lenovo Cloud Storage by SugarSync ● Desktop Power Manager ● Norton™ Studio ● AccuWeather ● Evernote® ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● ThinkVantage System Update ● Lenovo Solution Center ● Norton Internet Security (30 days of virus definitions) ● Skype™ ● Intel AppUp ● Intel Small Business Advantage ● Nitro Pro			
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide										Security ● Security chip (see information on left) ● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement ● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet			
Optical	DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive													
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset													
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)													
eSATA port	None													
Media reader	None													
Chipset	Intel Q85 Express Chipset													
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1													
Bluetooth	None													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio (1.5 watt)													
IEEE 1394	None													
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®													
Manageability	Intel Standard Manageability													
Modem	None													
Security chip	Trusted Platform Module (TPM1.2-compliant)													
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo													
Power supply	280 watts, autosensing, 85% PSU													
Machine	● Mini Tower (25L), business black color, metal case ● (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm ● 24.69 lb (11.20 kg) in maximum configuration ● Toolless cover removal, adapter retention ● Toolless disk, optical drive removal													
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk													
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max)													
														
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available													

See footnotes for important warranty information
US model(s) announced July 30, 2013

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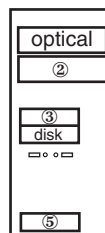
ThinkCentre M83 Mini Tower (10AG) - ES 5.2 (GMP)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Additional Front Graphics	2nd serial USB 2.0	Chassis intrusion switch	Key-board	ENERGY STAR 5.2	Global (G) GMP (P)	Ann date (mm/dd/yy)
10AG000PUS	3x5	i5-4570	4GBx1	1TB 7200	DVD	Intel 105	HD 8470	USB	None	Switch	USB	ES52 G P	Win7 Pro64 (DG) 07/30/13
10AG000QUS	3x5	i5-4570	2GBx1	500GB 7200	DVD	None	HD 4600	None	None	Switch	USB	ES52 G P	Win7 Pro64 07/30/13
10AG000RUS	3x5	i5-4570	4GBx1	500GB 7200	DVD	None	HD 4600	USB	None	Switch	USB	ES52 G P	Win7 Pro64 (DG) 07/30/13
10AG000SUS	3x5	i5-4570	4GBx1	500GB 7200	DVD±RW	None	HD 4600	USB	None	Switch	Finger	ES52 G P	Win7 Pro64 (DG) 08/20/13
10AG000TUS	3x5	i5-4570	4GBx1	1TB 7200	DVD±RW	Intel 105	HD 8470	USB	None	Switch	USB	ES52 G P	Win7 Pro64 (DG) 08/20/13
10AG000UUS	3x5	i5-4570	4GBx1	500GB 7200	DVD±RW	None	HD 4600	USB	None	Switch	USB	ES52 G P	Win7 Pro64 (DG) 09/10/13

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning	Mainstream enterprise stability and manageability										Preloaded operating system		
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology										<i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit		
Implementation	Processor in LGA1150 socket										Ready to install applications (only some listed)		
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets										<ul style="list-style-type: none">● Rescue and Recovery™● Password Manager		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz										Preloaded applications (only some listed)		
DP dongle	None										<ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro		
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide										Security		
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										<ul style="list-style-type: none">● Security chip (see information on left)● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement● Chassis intrusion switch on selected model(s)		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset										EPEAT™ Gold rating		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)										ENERGY STAR® 5.2-compliant		
eSATA port	None										ULE Gold		
Media reader	None										Cisco EnergyWise compatible		
Chipset	Intel Q85 Express Chipset										GREENGUARD® certified		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										RoHS-compliant		
Rear ports	Two USB 3.0, four USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models										Supports ThinkVantage Technologies		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										For compatible accessories, please go to TC-AQP sheet;		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1										For Lenovo service upgrade options, please go to S-TC sheet		
Bluetooth	None												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	Internal speaker for business audio (1.5 watt)												
IEEE 1394	None												
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®												
Manageability	Intel Standard Manageability												
Modem	None												
Security chip	Trusted Platform Module (TPM1.2-compliant)												
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo <i>Some:</i> Lenovo USB Fingerprint Keyboard (USB connector)												
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo												
Power supply	280 watts, autosensing, 85% PSU												
Machine	<ul style="list-style-type: none"> ● Mini Tower (25L), business black color, metal case ● (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm ● 24.69 lb (11.20 kg) in maximum configuration ● Toolless cover removal, adapter retention ● Toolless disk, optical drive removal 												
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk												
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max)												
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available												



See footnotes for important warranty information

US model(s) announced July 30, 2013, August 20, 2013, or September 10, 2013

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(MSK1T-2) September 2013

ThinkCentre M93/M93p Tiny, Small Pro, Mini Tower

ThinkCentre®



Lenovo ThinkCentre M93/M93p Tiny
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M93/M93p Tiny
with optional WLAN



Lenovo ThinkCentre M93/M93p Tiny
with optional external I/O box



Lenovo ThinkCentre M93/M93p Tiny
with optional external optical box



Lenovo ThinkCentre M93/M93p Tiny
(inside view)



Lenovo ThinkCentre M93/M93p Tiny



Lenovo ThinkCentre M93/M93p Mini Tower
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M93/M93p Mini Tower
with optional WLAN and graphic card



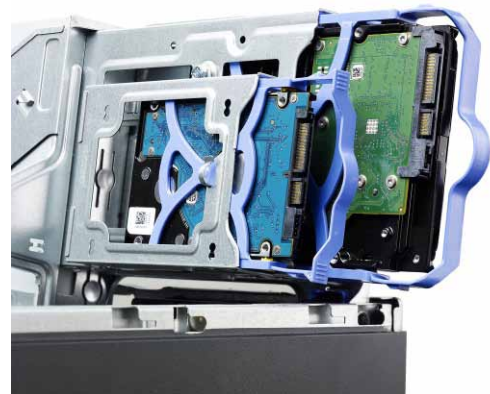
Lenovo ThinkCentre M93/M93p Small Pro
with Lenovo ThinkVision Monitor



Lenovo ThinkCentre M93/M93p Small Pro
with optional dual graphic cards
* Cable lock only available on some special bid
models



Lenovo ThinkCentre M93/M93p Small Pro
(inside view)



Optional 2.5" bay on
Lenovo ThinkCentre M93/M93p Small Pro
* Come with optional 2.5" 2nd HDD

ThinkCentre M93p Tiny (10AB) - TopSeller I

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Intel vPro	Preload	Ann date (mm/dd/yy)
10AB000DUS	i5-4570T	4GBx1	500G Hybrid	None	HD 4600	Intel 105	2nd DP	None	None	None	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000EUS	i5-4570T	4GBx1	500G Hybrid DVD±RW	HD 4600	Intel 105	2nd DP	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000FUS	i7-4765T	8GBx1	500G Hybrid DVD±RW	HD 4600	Intel 105	HDMI	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000GUS	i7-4765T	4GBx2	180G SSD DVD±RW	HD 4600	Intel 6235	HDMI	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000HUS	i7-4765T	4GBx1	500G Hybrid DVD±RW	HD 4600	Intel 105	HDMI	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000JUS	i5-4570T	4GBx2	180G SSD DVD±RW	HD 4600	Intel 6235	HDMI	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000KUS	i5-4570T	4GBx1	500G Hybrid DVD±RW	HD 4600	Intel 105	HDMI	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000QUS	i7-4765T	4GBx1	500G Hybrid DVD±RW	HD 4600	Intel 2230	HDMI	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000RUS	i5-4570T	4GBx1	500G Hybrid DVD±RW	HD 4600	Intel 2230	HDMI	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system
Processor	Intel® Core™ i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, one optional HDMI or one optional 2nd DisplayPort on select models, supports up to triple independent display; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1080 (HDMI) @60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)		Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro
DP dongle	None		
Disk	Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide Some: external optical box with slim DVD burner, 12.7mm high, tray-in, via USB 3.0 Serial ATA, SATA 6.0Gb/s support, integrated in chipset		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement• Chassis intrusion switch on selected model(s)
External optical	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
SATA controller	None		
Onboard SATA			
eSATA port			
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 3.0 (optional external optical box or external I/O box occupies one specific USB 3.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial / 2nd DisplayPort / HDMI on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 3.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot (Half Size)		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Some: Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Audio	High Definition (HD) Audio, Realtek® ALC283 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Machine	<ul style="list-style-type: none">• Tiny (1L), business black color; metal case• M93/p Tiny only: 7.0" W X 7.2" D X 1.4" H• M93/p Tiny only: 179mm W X 182mm D X 34.5mm H• M93/p Tiny only: 2.9 lb (1.3 kg), weight may vary by configuration• With VESA mount & optical box: 7.2" W X 7.2" D X 2.55" H• With VESA mount & optical box: 184mm W X 182mm D X 65mm H• With VESA mount & optical box: 5.1 lb (2.3 kg), weight may vary by configuration		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
 US model(s) announced July 2, 2013

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ThinkCentre M93p Tiny (10AB) - TopSeller II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Intel vPro	Preload	Ann date (mm/dd/yy)
10AB000SUS	i7-4765T	4GBx1	500G Hybrid	I/O box	HD 4600	Intel 105	HDMI	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000TUS	i5-4570T	4GBx1	500G Hybrid	I/O box	HD 4600	Intel 105	HDMI	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB000UUS	i5-4570T	4GBx1	500G Hybrid	I/O box	HD 4600	None	None	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB0010US	i5-4570T	4GBx1	500G 7200	None	HD 4600	Intel 105	2nd DP	None	Stand	None	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB0011US	i7-4765T	8GBx1	128G SSD	DVD±RW	HD 4600	Intel 6235	HDMI	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB0012US	i7-4765T	4GBx1	128G SSD	DVD±RW	HD 4600	Intel 2230	HDMI	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB0013US	i5-4570T	4GBx1	500G 7200	DVD±RW	HD 4600	Intel 105	2nd DP	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB0014US	i5-4570T	4GBx1	500G 7200	I/O box	HD 4600	Intel 105	2nd DP	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB0015US	i5-4570T	4GBx1	500G 7200	DVD±RW	HD 4600	Intel 2230	2nd DP	None	None	Mount	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB0016US	i5-4570T	4GBx1	500G 7200	None	HD 4600	Intel 105	Serial	None	Stand	None	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AB002AUS	i5-4570T	4GBx1	128G SSD	None	HD 4600	Intel 2230	2nd DP	None	Stand	None	USB	vPro	Win7 Pro64 (DG)	12/10/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Ultimate security, stability, and manageability for the enterprise			Preloaded operating system		
Processor	Intel® Core™ i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology			Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit		
Implementation	Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket			Ready to install applications (only some listed)		
Memory	16GB max, PC3-12800 1600MHz DDR3, two 204-pin SODIMM sockets (notebook)			<ul style="list-style-type: none">• Rescue and Recovery™• Password Manager		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, one optional HDMI or one optional 2nd DisplayPort on select models, supports up to triple independent display; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1080 (HDMI)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)			Preloaded applications (only some listed)		
DP dongle	None			<ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro		
Disk	Some: SATA 6.0Gb/s, 2.5" Wide, 7200 rpm Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide					
External optical	Some: external optical box with slim DVD burner, 12.7mm high, tray-in, via USB 3.0					
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset					
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar					
eSATA port	None					
Chipset	Intel Q87 Express Chipset					
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)					
Rear ports	Three USB 3.0 (optional external optical box or external I/O box occupies one specific USB 3.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial / 2nd DisplayPort / HDMI on selected models)					
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 3.0 port					
PCIe Mini Card	One PCI Express® Mini Card slot (Half Size)					
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2					
Bluetooth	Some: Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter			Security		
Audio	High Definition (HD) Audio, Realtek® ALC283 codec			<ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)		
Speaker	Internal speaker for business audio (1.5 watt)			<ul style="list-style-type: none">• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement• Chassis intrusion switch on selected model(s)		
IEEE 1394	None			EPEAT™ Gold rating		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			ENERGY STAR® 5.2-compliant		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)			ULE Gold		
Modem	None			Cisco EnergyWise compatible		
Security chip	Trusted Platform Module (TPM1.2-compliant)			GREENGUARD® certified		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo			RoHS-compliant		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			Supports ThinkVantage Technologies		
Floor Stand	Optional system floor stand for vertical orientation			For compatible accessories, please go to TC-AQP sheet;		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard			For Lenovo service upgrade options, please go to S-TC sheet		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU					
Machine	<ul style="list-style-type: none">• Tiny (1L), business black color; metal case• M93/p Tiny only: 7.0" W X 7.2" D X 1.4" H• M93/p Tiny only: 179mm W X 182mm D X 34.5mm H• M93/p Tiny only: 2.9 lb (1.3 kg), weight may vary by configuration• With VESA mount & optical box: 7.2" W X 7.2" D X 2.55" H• With VESA mount & optical box: 184mm W X 182mm D X 65mm H• With VESA mount & optical box: 5.1 lb (2.3 kg), weight may vary by configuration					
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available					

See footnotes for important warranty information
US model(s) announced July 2, 2013 or December 10, 2013

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ThinkCentre M93p Tiny (10AB) - TopSeller III

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ⁸	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Intel vPro	Preload	Ann date (mm/dd/yy)
10AB002TUS	i7-4765T	4GBx1	500G 7200	None	HD 4600	7260 ac	HDMI	None	Stand	None	USB	vPro	Win7 P64 DG Win8.1	01/14/14
10AB002VUS	i5-4570T	4GBx1	500G 7200	None	HD 4600	7260 bn	2nd DP	None	Stand	None	USB	vPro	Win7 P64 DG Win8.1	01/14/14
10AB002WUS	i7-4765T	8GBx1	128G SSD	None	HD 4600	7260 ac	2nd DP	None	Stand	None	USB	vPro	Win7 P64 DG Win8.1	01/14/14
10AB002UUS	i5-4570T	4GBx1	500G 7200	None	HD 4600	7260 ac	HDMI	None	Stand	None	USB	vPro	Win7 P64 DG Win8.1	01/14/14
10AB002XUS	i5-4570T	4GBx1	500G Hybrid	DVD±RW	HD 4600	7260 bn	2nd DP	None	None	Mount	USB	vPro	Win7 P64 DG Win8.1	02/25/14
10AB002YUS	i7-4765T	4GBx1	500G Hybrid	DVD±RW	HD 4600	7260 bn	2nd DP	None	None	Mount	USB	vPro	Win7 P64 DG Win8.1	02/25/14
10AB0030US	i7-4765T	8GBx1	128G SSD	DVD±RW	HD 4600	7260 ac	2nd DP	None	None	Mount	USB	vPro	Win7 P64 DG Win8.1	02/25/14

●Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit
Processor	Intel® Core™ i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Implementation			
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, one optional HDMI or one optional 2nd DisplayPort on select models, supports up to triple independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1080 (HDMI)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i>		
DP dongle	None		
Disk	<i>Some:</i> SATA 6.0Gb/s, 2.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide		
External optical	<i>Some:</i> external optical box with slim DVD burner, 12.7mm high, tray-in, via USB 3.0		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 3.0 (optional external optical box or external I/O box occupies one specific USB 3.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial / 2nd DisplayPort / HDMI on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 3.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot (Half Size)		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11ac/a/b/g/n wireless, PCIe Half Mini Card, Intel Dual Band Wireless-AC 7260, Wi-Fi + BT combo adapter, 2x2		
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Audio	High Definition (HD) Audio, Realtek® ALC283 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Machine	<ul style="list-style-type: none">● Tiny (1L), business black color; metal case● <i>M93/p Tiny only:</i> 7.0" W X 7.2" D X 1.4" H● <i>M93/p Tiny only:</i> 179mm W X 182mm D X 34.5mm H● <i>M93/p Tiny only:</i> 2.9 lb (1.3 kg), weight may vary by configuration● <i>With VESA mount & optical box:</i> 7.2" W X 7.2" D X 2.55" H● <i>With VESA mount & optical box:</i> 184mm W X 182mm D X 65mm H● <i>With VESA mount & optical box:</i> 5.1 lb (2.3 kg), weight may vary by configuration		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● <i>Chassis intrusion switch on selected model(s)</i> EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US model(s) announced January 14 or February 25, 2014

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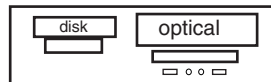
ThinkCentre M93p SFF Pro (10A9) - TopSeller - I

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Graphics	Additional Front USB 2.0	2nd serial port	Parallel port	Chassis intrusion switch	Floor stand	Intel vPro	Preload	Ann date (mm/dd/yy)
10A9000HUS	4x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	HD 4600	None	None	None	None	None	vPro	Win7 Pro64 (DG)	06/18/13
10A9000JUS	4x4	i5-4670	4GBx1	500G Hybrid	DVD±RW	None	HD 4600	USB	None	None	None	None	vPro	Win7 Pro64 (DG)	06/18/13
10A9000KUS	4x4	i7-4770	4GBx1	1TB 7200	DVD±RW	None	GT 620	USB	None	None	None	None	vPro	Win7 Pro64 (DG)	06/18/13
10A9000LUS	4x4	i7-4770	8GBx1	500G Hybrid	DVD±RW	None	GT 620	None	None	None	None	None	vPro	Win7 Pro64 (DG)	06/18/13
10A9000MUS	4x4	i7-4770	4GBx2	500G Hybrid	DVD±RW	None	GT 620	USB	Serial	None	None	Stand	vPro	Win7 Pro64 (DG)	06/18/13
10A90014US	4x4	i7-4770	8GBx1	1TB 7200	DVD±RW	105	GT 620	USB	Serial	Parallel	None	Stand	vPro	Win7 Pro64 (DG)	08/13/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		
Implementation			
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Maximum resolution: 2560x1600 (DisplayPort) @60Hz; 1920x1200 (VGA) @60Hz (Reduced Blanking) Some: NVIDIA® GeForce® GT 620, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz		
DP dongle	None		
Disk	Some: SATA 6.0Gb/s 7200 rpm, 3.5" wide Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	None		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Some: System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">• SFF Pro (12.9L), business black color; metal case• (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm• 17.20 lb (7.8 kg) in maximum configuration• Toolless cover removal, adapter retention• Toolless disk and optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 2: 2.5", N/A, internal, opt, come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max) Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		



See footnotes for important warranty information
US model(s) announced June 18, 2013 or August 13, 2013

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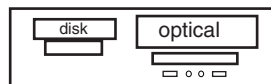
ThinkCentre M93p SFF Pro (10A9) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Floor stand	Intel vPro	Preload	Ann date (mm/dd/yy)
10A9000NUS	4x4	i7-4770	4GBx1	1TB 7200	DVD±RW	None	None	HD 8470	USB	None	None	Stand	vPro	Win7 Pro64 (DG)	06/18/13
10A9000PUS	4x4	i7-4770	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	None	Stand	vPro	Win7 Pro64 (DG)	06/18/13
10A9000QUS	4x4	i5-4670	4GBx2	500G Hybrid	DVD±RW	None	None	GT 620	USB	Serial	None	Stand	vPro	Win7 Pro64 (DG)	06/18/13
10A9000RUS	4x4	i5-4670	4GBx1	1TB 7200	DVD±RW	None	None	HD 8470	USB	None	None	Stand	vPro	Win7 Pro64 (DG)	06/18/13
10A9000SUS	4x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	None	Stand	vPro	Win7 Pro64 (DG)	06/18/13
10A90016US	4x4	i7-4770	4GBx1	1TB 7200	DVD±RW	None	None	HD 4600	None	None	None	Stand	vPro	Win7 Pro64 (DG)	10/08/13
10A90017US	4x4	i5-4570	4GBx1	128G SSD	DVD±RW	None	None	HD 4600	None	None	None	Stand	vPro	Win7 Pro64 (DG)	10/08/13
10A9002CUS	4x4	i5-4670	4GBx1	500G Hybrid	DVD±RW	None	None	GT 620	None	None	None	Stand	vPro	Win7 Pro64 (DG)	12/10/13

● Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz;</i> <i>1920x1200 (VGA)@60Hz (Reduced Blanking)</i> <i>Some: AMD Radeon™ HD 8470, DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz,</i> <i>Some: NVIDIA® GeForce® GT 620, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz,</i>		
DP dongle	None		
Disk	<i>Some: SATA 6.0Gb/s 7200 rpm, 3.5" wide</i> <i>Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide</i> <i>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide</i>		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	None		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● SFF Pro (12.9L), business black color; metal case● (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm● 17.20 lb (7.8 kg) in maximum configuration● Toolless cover removal, adapter retention● Toolless disk and optical drive removal <div><div>disk</div><div>optical</div></div>		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 2: 2.5", N/A, internal, opt, come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max) Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		



See footnotes for important warranty information

US model(s) announced June 18, 2013, October 8, 2013, or December 10, 2013

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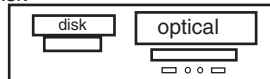
(MSS1S-4) December 2013

Type-model	Slot x Pro-bay	Processor	Memory ⁸	SATA disk GB rpm	SATA optical	Optional 2.5" Bay	PCle WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Floor stand	Intel vPro	Preload	Ann date (mm/dd/yy)
10A9002TUS	4x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	None	HD 7450	USB	None	None	Stand	vPro	Win7 P64 DG Win8.1	02/04/14
10A9002UUS	4x4	i7-4770	8GBx1	500G 7200	DVD±RW	None	None	None	HD 7450	USB	None	None	Stand	vPro	Win7 P64 DG Win8.1	02/04/14
10A9002VUS	4x4	i7-4770	8GBx1	1TB 7200	DVD±RW	None	None	None	HD 7450	USB	None	None	Stand	vPro	Win7 P64 DG Win8.1	02/04/14
10A9002WUS	4x4	i5-4670	4GBx1	1TB 7200	DVD±RW	2.5" bay	None	None	HD 7450	USB	None	None	Stand	vPro	Win7 P64 DG Win8.1	02/11/14
10A90034US	4x4	i5-4570	4GBx1	500G 7200	DVD±RW	2.5" bay	None	None	HD 8570	None	None	None	Stand	vPro	Win7 P64 DG Win8.1	03/25/14

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: AMD Radeon™ HD 7450, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Max resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz Some: AMD Radeon HD 8570, DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; Max resolution: 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz,		
DP dongle	None		
Disk	Some: SATA 6.0Gb/s 7200 rpm, 3.5" wide		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	None		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCle WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">• SFF Pro (12.9L), business black color; metal case• (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm• 17.20 lb (7.8 kg) in maximum configuration• Toolless cover removal, adapter retention• Toolless disk and optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 2: 2.5", N/A, internal, opt, come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max) Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

Preloaded operating system	Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit
	Ready to install applications (only some listed)
	<ul style="list-style-type: none">• Rescue and Recovery™• Password Manager
	Preloaded applications (only some listed)
	<ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro
	Security
	<ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• Chassis intrusion switch on selected model(s)
	EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant
	Supports ThinkVantage Technologies
	For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet



Product Specifications Reference (PSREF)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670 Processor (4 cores / 4 threads, 3.4GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller		<div>Preloaded operating system</div> <div>Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit</div> <div>Ready to install applications (only some listed)</div> <div><div>● Rescue and Recovery™</div><div>● Password Manager</div></div> <div>Preloaded applications (only some listed)</div> <div><div>● ThinkVantage® Product Recovery</div><div>● ThinkVantage System Update</div><div>● ThinkVantage Communication Utility</div><div>● Desktop Power Manager</div><div>● View Management Utility</div><div>● Lenovo Cloud Storage by SugarSync</div><div>● Lenovo Solution Center</div><div>● Lenovo Message Center Plus</div><div>● Norton™ Internet Security (30 days of virus definitions)</div><div>● Adobe® Reader®</div><div>● Skype™</div><div>● Microsoft Office preloaded; purchase a product key to activate</div><div>● Cyberlink PowerDVD (DVD±RW, DVD)</div><div>● Cyberlink Power2Go (DVD±RW)</div><div>● Cyberlink PowerProducer (DVD±RW)</div><div>● Evernote</div><div>● Intel AppUp</div><div>● Intel Small Business Advantage</div><div>● Nitro Pro</div></div>
Implementation	Processor in LGA1150 socket		
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i> <i>Some: AMD Radeon HD 8570, DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; Max resolution: 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz</i> <i>Some: NVIDIA® GeForce® GT 620, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz</i>		
DP dongle	None		
Disk	<i>Some: SATA 6.0Gb/s 7200 rpm, 3.5" wide</i> <i>Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide</i> <i>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide</i>		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	<i>Some: 29-in-1 media reader, internal USB 2.0</i>		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	280 watts, autosensing, 85% PSU		
Machine	<div><div><div>● Mini Tower (25L), business black color, metal case</div><div>● (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm</div><div>● 24.69 lb (11.20 kg) in maximum configuration</div><div>● Toolless cover removal, adapter retention</div><div>● Toolless disk, optical drive removal</div></div></div>		
Bay	<div>Bay 1: 5.25", 1.6" high, access, std optical</div> <div>Bay 2: 5.25", 1.6" high, access, open</div> <div>Bay 3: 3.5", 1" high, access, opt reader</div> <div>Bay 4: 3.5", 1" high, no access, std disk</div> <div>Bay 5: 3.5", 1" high, no access, opt disk</div>		
Slot	<div>Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max)</div> <div>Slot 2: half-length, full-height, PCIe 2.0 x1</div> <div>Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max)</div> <div>Slot 4: half-length, full-height, 32-bit PCI 2.3</div>		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

optical

②

③

disk

⏏ ⏏

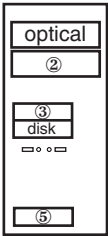
⑤

ThinkCentre M93p Mini Tower (10A7) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-cessor	Memory ^a	SATA disk GB rpm	SATA optical	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Parallel port	Chassis intrusion switch	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10A70028US	4x5	i5-4570	4Gx1	500G 7200	DVD±RW	None	HD 7450	USB	None	None	None	vPro	None	Win7 P64 DG	Win8.1 02/04/14
10A70029US	4x5	i7-4770	8Gx1	500G 7200	DVD±RW	None	HD 7450	USB	None	None	None	vPro	None	Win7 P64 DG	Win8.1 02/04/14
10A7002AUS	4x5	i7-4770	8Gx1	1TB 7200	DVD±RW	None	HD 7450	USB	None	None	None	vPro	None	Win7 P64 DG	Win8.1 02/04/14

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro	
Implementation	Processor in LGA1150 socket			
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz;</i> 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some: AMD Radeon™ HD 7450, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts;</i> <i>Max resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz</i>			
DP dongle	None			
Disk	<i>Some: SATA 6.0Gb/s 7200 rpm, 3.5" wide</i>			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)			
eSATA port	None			
Media reader	<i>Some: 29-in-1 media reader, internal USB 2.0</i>			
Chipset	Intel Q87 Express Chipset			
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
PCIe WLAN	None			
Bluetooth	None			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio (1.5 watt)			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®			
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)			
Modem	None			
Security chip	Trusted Platform Module (TPM1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	280 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">• Mini Tower (25L), business black color, metal case• (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm• 24.69 lb (11.20 kg) in maximum configuration• Toolless cover removal, adapter retention• Toolless disk, optical drive removal			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk			
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max) Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
 US model(s) announced February 4, 2014

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ThinkCentre M93p Tiny (10AA) - 1 Year Depot

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Keyboard / mouse	Intel vPro	Preload	Ann date (mm/dd/yy)
10AA0023US	i5-4570T	4GBx1	500G 7200	None	HD 4600	Intel 105	HDMI	None	Stand	None	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AA0024US	i7-4765T	4GBx1	500G 7200	None	HD 4600	Intel 105	HDMI	None	Stand	None	USB	vPro	Win7 Pro64 (DG)	07/02/13
10AA0025US	i7-4765T	4GBx1	500G 7200	None	HD 4600	Intel 6235	HDMI	None	Stand	None	USB	vPro	Win7 Pro64 (DG)	07/02/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- A depot repair service 1-year limited warranty

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Processor	Intel® Core™ i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology		
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, one optional HDMI or one optional 2nd DisplayPort on select models, supports up to triple independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1080 (HDMI)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)</i>		
DP dongle	None		
Disk	<i>Some:</i> SATA 6.0Gb/s, 2.5" Wide, 7200 rpm		
External optical	None		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 3.0 (optional external optical box or external I/O box occupies one specific USB 3.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial / 2nd DisplayPort / HDMI on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 3.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot (Half Size)		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Audio	High Definition (HD) Audio, Realtek® ALC283 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Machine	<ul style="list-style-type: none">● Tiny (1L), business black color; metal case● <i>M93/p Tiny only:</i> 7.0" W X 7.2" D X 1.4" H● <i>M93/p Tiny only:</i> 179mm W X 182mm D X 34.5mm H● <i>M93/p Tiny only:</i> 2.9 lb (1.3 kg), weight may vary by configuration● <i>With VESA mount & optical box:</i> 7.2" W X 7.2" D X 2.55" H● <i>With VESA mount & optical box:</i> 184mm W X 182mm D X 65mm H● <i>With VESA mount & optical box:</i> 5.1 lb (2.3 kg), weight may vary by configuration		
Limited Warranty	1-years - depot repair service / service upgrades available		

See footnotes for important warranty information
US model(s) announced July 2, 2013

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(MSS1N-6) July 2013

ThinkCentre M93p Tiny (10AA)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AA0027US	i7-4765T	4GBx1	500G Hybrid	DVD±RW	HD 4600	Intel 6235	2nd DP	None	None	Mount	vPro	None	Win7 Pro64 (DG)	09/10/13
10AA0028US	i5-4570T	4GBx1	500G Hybrid	DVD±RW	HD 4600	Intel 6235	2nd DP	None	None	Mount	vPro	None	Win7 Pro64 (DG)	09/10/13
10AA002BUS	i7-4765T	4GBx1	500G 7200	None	HD 4600	Intel 2230	2nd DP	None	Stand	None	vPro	None	Win7 Pro64 (DG)	09/10/13
10AA002AUS	i7-4765T	4GBx1	500G Hybrid	I/O box	HD 4600	Intel 2230	HDMI	None	None	Mount	vPro	None	Win7 Pro64 (DG)	09/10/13
10AA0029US	i5-4570T	4GBx1	500G Hybrid	I/O box	HD 4600	Intel 2230	HDMI	None	None	Mount	vPro	None	Win7 Pro64 (DG)	09/10/13
10AA002CUS	i5-4570T	4GBx1	500G 7200	None	HD 4600	Intel 2230	2nd DP	None	Stand	None	vPro	None	Win7 Pro64 (DG)	09/10/13
10AA003PUS	i7-4765T	4GBx1	256G SSD	None	HD 4600	Intel 6235	2nd DP	None	Stand	None	vPro	None	Win7 Pro64 (DG)	11/12/13
10AA003QUS	i5-4570T	4GBx1	256G SSD	None	HD 4600	Intel 6235	2nd DP	None	Stand	None	vPro	None	Win7 Pro64 (DG)	11/12/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- 3-year limited warranty

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system
Processor	Intel® Core™ i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology		
Implementation	Processor in LGA1150 socket		Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, one optional HDMI or one optional 2nd DisplayPort on select models, supports up to triple independent display; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1080 (HDMI)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)		Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro
DP dongle	None		
Disk	Some: SATA 6.0Gb/s, 2.5" Wide, 7200 rpm Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement• Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies
External optical	Some: external optical box with slim DVD burner, 12.7mm high, tray-in, via USB 3.0		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 3.0 (optional external optical box or external I/O box occupies one specific USB 3.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial / 2nd DisplayPort / HDMI on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 3.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot (Half Size)		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Some: Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Audio	High Definition (HD) Audio, Realtek® ALC283 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Machine	<ul style="list-style-type: none">• Tiny (1L), business black color; metal case• M93/p Tiny only: 7.0" W X 7.2" D X 1.4" H• M93/p Tiny only: 179mm W X 182mm D X 34.5mm H• M93/p Tiny only: 2.9 lb (1.3 kg), weight may vary by configuration• With VESA mount & optical box: 7.2" W X 7.2" D X 2.55" H• With VESA mount & optical box: 184mm W X 182mm D X 65mm H• With VESA mount & optical box: 5.1 lb (2.3 kg), weight may vary by configuration		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information

US model(s) announced September 10, 2013 or November 12, 2013

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(MSS1N-7) November 2013

ThinkCentre M93p Tiny (10AA) - GMP

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	SATA disk GB rpm	External optical / I/O box	Graphics	PCIe Mini Card WLAN / BT	Optional port	Chassis intrusion switch	Floor stand	VESA mount	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AA001YUS	i5-4570T	2GBx1	320G 5400	None	HD 4600	Intel 105	None	Switch	Stand	None	vPro	G P	Win7 Pro64	07/02/13
10AA0020US	i5-4570T	4GBx1	500G 5400	DVD	HD 4600	Intel 2230	Serial	Switch	None	Mount	vPro	G P	Win7 Pro64 (DG)	07/02/13
10AA0021US	i7-4765T	4GBx1	128G SSD	DVD	HD 4600	Intel 2230	2nd DP	Switch	None	Mount	vPro	G P	Win7 Pro64 (DG)	07/02/13
10AA0022US	i5-4570T	4GBx1	500G 5400	None	HD 4600	Intel 2230	HDMI	Switch	Stand	None	vPro	G P	Win7 Pro64 (DG)	07/02/13
10AA002RUS	i5-4570T	4GBx1	500G 7200	None	HD 4600	Intel 2230	HDMI	Switch	Stand	None	vPro	G P	Win7 Pro64 (DG)	10/08/13
10AA002SUS	i5-4570T	4GBx1	500G 7200	DVD±RW	HD 4600	Intel 2230	Serial	Switch	None	Mount	vPro	G P	Win7 Pro64 (DG)	10/08/13
10AA002UUS	i5-4570T	4GBx1	500G Hybrid	None	HD 4600	Intel 2230	HDMI	None	Stand	None	vPro	G P	Win7 Pro64 (DG)	11/12/13
10AA002VUS	i7-4765T	4GBx1	500G Hybrid	None	HD 4600	Intel 2230	2nd DP	None	Stand	None	vPro	G P	Win7 Pro64 (DG)	11/12/13
10AA002WUS	i5-4570T	4GBx1	500G 7200	None	HD 4600	Intel 105	2nd DP	None	Stand	None	vPro	G P	Win7 Pro64 (DG)	11/12/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● <i>Chassis intrusion switch on selected model(s)</i> EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Processor	Intel® Core™ i5-4570T Processor (2 cores / 4 threads, 2.9GHz, 4MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4765T Processor (4 cores / 8 threads, 2.0GHz, 8MB cache), Turbo Boost 2.0 (3.0GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, one DisplayPort™, one optional HDMI or one optional 2nd DisplayPort on select models, supports up to triple independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1080 (HDMI)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)		
DP dongle	None		
Disk	<i>Some:</i> SATA 3.0Gb/s, 2.5" Wide, 5400 rpm <i>Some:</i> SATA 6.0Gb/s, 2.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide		
External optical	<i>Some:</i> external optical box with slim DVD-ROM, 12.7mm high, tray-in, via USB 3.0 <i>Some:</i> external optical box with slim DVD burner, 12.7mm high, tray-in, via USB 3.0		
SATA controller	Serial ATA, SATA 6.0Gb/s support, integrated in chipset		
Onboard SATA	One SATA cable (1-drop to device), one SATA 6.0Gb/s connector on planar		
eSATA port	None		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	Three USB 3.0 (optional external optical box or external I/O box occupies one specific USB 3.0 on some models), ethernet (RJ-45), VGA DB-15, DisplayPort connector, one optional port (USB 2.0 / serial / 2nd DisplayPort / HDMI on selected models)		
I/O box	Optional external I/O box, extends four USB 2.0 (two on front and two on rear), one serial, and two PS/2 (for keyboard and mouse), via USB 3.0 port		
PCIe Mini Card	One PCI Express® Mini Card slot (Half Size)		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	<i>Some:</i> Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Audio	High Definition (HD) Audio, Realtek® ALC283 codec		
Speaker	Internal speaker for business audio (1.5 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	Optional system floor stand for vertical orientation		
VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm mount standard		
Power supply	65 watts AC/DC adapter, autosensing, 88% PSU		
Machine	<ul style="list-style-type: none">● Tiny (1L), business black color; metal case● M93/p Tiny only: 7.0" W X 7.2" D X 1.4" H● M93/p Tiny only: 179mm W X 182mm D X 34.5mm H● M93/p Tiny only: 2.9 lb (1.3 kg), weight may vary by configuration● With VESA mount & optical box: 7.2" W X 7.2" D X 2.55" H● With VESA mount & optical box: 184mm W X 182mm D X 65mm H● With VESA mount & optical box: 5.1 lb (2.3 kg), weight may vary by configuration		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
 US model(s) announced July 2, 2013, October 8, 2013, or November 12, 2013

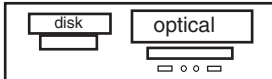
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 (MSS1N-5) November 2013

ThinkCentre M93p SFF Pro (10A8)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ^a	SATA disk GB rpm	SATA optical	Optional 2.5" Bay	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Floor stand	Intel vPro	Preload	Ann date (mm/dd/yy)
10A8000TUS	4x4	i7-4770	4GBx2	1TB 7200	DVD±RW	None	Intel 105	Media	GT 620	None	Serial	None	Stand	vPro	Win7 P64 DG Win8	06/18/13
10A8000UUS	4x4	i7-4770	4GBx2	1TB 7200	DVD±RW	None	None	None	GT 620	USB	Serial	None	Stand	vPro	Win7 P64 DG Win8	06/18/13
10A8000VUS	4x4	i7-4770	4GBx1	500G 7200	DVD±RW	None	None	None	HD 4600	USB	Serial	None	Stand	vPro	Win7 P64 DG Win8	06/18/13
10A8000WUS	4x4	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	None	HD 4600	USB	Serial	None	Stand	vPro	Win7 P64 DG Win8	06/18/13
10A8000XUS	4x4	i5-4570	8GBx1	1TB 7200	DVD±RW	None	Intel 105	None	HD 4600	USB	Serial	None	Stand	vPro	Win7 P64 DG Win8	06/18/13
10A8000YUS	4x4	i5-4570	4GBx1	250G 7200	DVD±RW	None	None	None	HD 4600	None	None	None	Stand	vPro	Win7 P64 DG Win8	06/18/13
10A80037US	4x4	i5-4570	4GBx1	500G 7200	DVD±RW	2.5" bay	None	None	HD 7450	USB	None	None	Stand	vPro	Win7 P64 DG Win8.1	02/04/14
10A80038US	4x4	i7-4770	8GBx1	1TB 7200	DVD±RW	2.5" bay	None	None	HD 7450	USB	None	None	Stand	vPro	Win7 P64 DG Win8.1	02/04/14

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- 3-year limited warranty

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system
Processor	Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) Some: AMD Radeon™ HD 7450, DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Max resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)		
eSATA port	None		
Media reader	Some: 29-in-1 media reader, slim, internal USB 2.0		
Chipset	Intel Q87 Express Chipset		
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio (1 watt)		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Modem	None		
Security chip	Trusted Platform Module (TPM1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● SFF Pro (12.9L), business black color; metal case● (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm● 17.20 lb (7.8 kg) in maximum configuration● Toolless cover removal, adapter retention● Toolless disk and optical drive removal 		
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 2: 2.5", N/A, internal, opt or come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader		
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max) Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

EPEAT™ Gold rating
 ENERGY STAR® 5.2-compliant
 ULE Gold
 Cisco EnergyWise compatible
 GREENGUARD® certified
 RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories,
 please go to TC-AQP sheet;
 For Lenovo service upgrade options,
 please go to S-TC sheet

See footnotes for important warranty information

US model(s) announced June 18, 2013 or February 4, 2014

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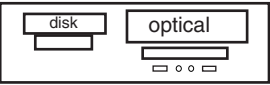
(MSS1S-1) February 2014

ThinkCentre M93p SFF Pro (10A8) - GMP

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Pro-processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Floor stand	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10A8001GUS	4x4	i5-4570	2GBx1	500G 7200 DVD		None	None	HD 4600	None	None	Switch	None	vPro	G P	Win7 Pro64	06/18/13
10A8001HUS	4x4	i5-4570	4GBx1	500G 7200 DVD		Intel 105	None	HD 4600	USB	None	Switch	Stand	vPro	G P	Win7 Pro64 (DG)	06/18/13
10A8001JUS	4x4	i7-4770	4GBx1	1TB 7200 DVD		Intel 105	None	HD 8470	USB	None	Switch	Stand	vPro	G P	Win7 Pro64 (DG)	06/18/13
10A8002CUS	4x4	i5-4570	4GBx1	500G 7200 DVD±RW		None	None	HD 4600	None	None	None	Stand	vPro	G P	Win7 Pro64 (DG)	11/12/13
10A8002DUS	4x4	i7-4770	4GBx1	500G 7200 DVD±RW		None	None	HD 4600	USB	Serial	None	Stand	vPro	G P	Win7 Pro64 (DG)	11/12/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket											Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
Implementation	Processor in LGA1150 socket											Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets											Preloaded applications (only some listed) • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • Desktop Power Manager • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Microsoft Office preloaded; purchase a product key to activate • Cyberlink PowerDVD (DVD±RW, DVD) • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Evernote • Intel AppUp • Intel Small Business Advantage • Nitro Pro
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> AMD Radeon™ HD 8470 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide											
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support											
SATA controller	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)											
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)											
eSATA port	None											
Media reader	None											
Chipset	Intel Q87 Express Chipset											
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1											
Bluetooth	None											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio (1 watt)											
IEEE 1394	None											
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®											
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)											
Modem	None											
Security chip	Trusted Platform Module (TPM1.2-compliant)											
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo											
Floor Stand	<i>Some:</i> System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> • SFF Pro (12.9L), business black color; metal case • (WxDxH) 13.31" X 14.76" X 4.02"; 338mm X 375mm X 102mm • 17.20 lb (7.8 kg) in maximum configuration • Toolless cover removal, adapter retention • Toolless disk and optical drive removal 											
Bay	Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 2: 2.5", N/A, internal, opt, come with opt 2.5" 2nd disk Bay 4: 3.5", 0.5" high, external, opt reader											
Slot	Slot 1: Low Profile, PCI Express 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40w max) Slot 4: Low Profile, 32-bit PCI 2.3											Security <ul style="list-style-type: none"> • Security chip (see information on left) • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® MicroSaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Serial port I/O control • Individual USB port disablement • Chassis intrusion switch on selected model(s)
												EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant
												Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information

US model(s) announced June 18, 2013 or November 12, 2013

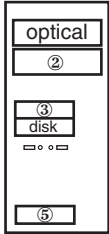
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(MSS1S-2) November 2013

ThinkCentre M93p Mini Tower (10A6)

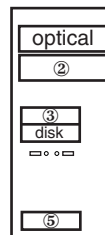
Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10A6000UUS	4x5	i7-4770	4GBx2	1TB 7200	DVD±RW	None	Media	GT 620	None	Serial	None	vPro	None	Win7 P64 DG Win8	06/18/13
10A6000VUS	4x5	i7-4770	4GBx2	500G 7200	DVD±RW	None	Media	HD 8570	None	Serial	None	vPro	None	Win7 P64 DG Win8	06/18/13
10A6000WUS	4x5	i7-4770	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	USB	None	None	vPro	None	Win7 P64 DG Win8	06/18/13
10A6002NUS	4x5	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 7450	USB	None	None	vPro	None	Win7 P64 DG Win8.1	02/04/14
10A6002PUS	4x5	i7-4770	8GBx1	1TB 7200	DVD±RW	None	None	HD 7450	USB	None	None	vPro	None	Win7 P64 DG Win8.1	02/04/14

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- 3-year limited warranty

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket			Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit		
Implementation						
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets					
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking) <i>Some:</i> AMD Radeon HD 8570 , DirectX 11, 3D Hardware Acceleration, 2GB, PCI Express 3.0 x16 adapter (8x elec), one VGA, one HDMI, 40 watts; <i>Max resolution:</i> 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> NVIDIA® GeForce® GT 620 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one VGA, one DisplayPort, 30 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz <i>Some:</i> AMD Radeon™ HD 7450 , DirectX 11, 3D Hardware Acceleration, 1GB, PCI Express 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Max resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz					
DP dongle	None					
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide					
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive					
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support					
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)					
eSATA port	None					
Media reader	<i>Some:</i> 29-in-1 media reader, internal USB 2.0					
Chipset	Intel Q87 Express Chipset					
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)					
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)					
PCIe WLAN	None					
Bluetooth	None					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec					
Speaker	Internal speaker for business audio (1.5 watt)					
IEEE 1394	None					
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®					
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)					
Modem	None					
Security chip	Trusted Platform Module (TPM1.2-compliant)					
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo					
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo					
Power supply	280 watts, autosensing, 85% PSU					
Machine	<ul style="list-style-type: none">• Mini Tower (25L), business black color, metal case• (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm• 24.69 lb (11.20 kg) in maximum configuration• Toolless cover removal, adapter retention• Toolless disk, optical drive removal					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk					
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max) Slot 4: half-length, full-height, 32-bit PCI 2.3					
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available					

Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager
Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Communication Utility• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Message Center Plus• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote• Intel AppUp• Intel Small Business Advantage• Nitro Pro
Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• Chassis intrusion switch on selected model(s)
EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant
Supports ThinkVantage Technologies
For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

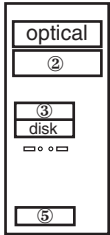


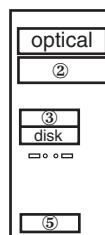
ThinkCentre M93p Mini Tower (10A6) - GMP

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ⁸	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Additional Front USB 2.0	2nd serial port	Chassis intrusion switch	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10A60017US	4x5	i5-4570	2GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	Switch	vPro	G P	Win7 Pro64	06/18/13
10A60018US	4x5	i7-4770	4GBx1	1TB 7200	DVD±RW	Intel 105	None	HD 8470	USB	None	Switch	vPro	G P	Win7 Pro64 (DG)	06/18/13
10A60019US	4x5	i5-4570	4GBx1	500G 7200	DVD±RW	Intel 105	None	HD 4600	USB	None	Switch	vPro	G P	Win7 Pro64 (DG)	06/18/13
10A6001DUS	4x5	i5-4570	4GBx1	500G 7200	DVD	Intel 105	None	HD 4600	USB	None	Switch	vPro	G P	Win7 Pro64 (DG)	08/20/13
10A6001EUS	4x5	i7-4770	4GBx1	1TB 7200	DVD	Intel 105	None	HD 8470	USB	None	Switch	vPro	G P	Win7 Pro64 (DG)	08/20/13
10A6001FUS	4x5	i5-4570	2GBx1	500G 7200	DVD	None	None	HD 4600	None	None	Switch	vPro	G P	Win7 Pro64	08/20/13
10A6001SUS	4x5	i7-4770	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	USB	Serial	None	vPro	G P	Win7 Pro64 (DG)	11/12/13
10A6001TUS	4x5	i5-4570	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	None	None	vPro	G P	Win7 Pro64 (DG)	11/12/13

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-4570 Processor (4 cores / 4 threads, 3.2GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4770 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Intel Small Business Advantage● Nitro Pro	
Memory	32GB max, UDIMM, PC3-12800 1600MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, one VGA, two DisplayPort™, supports three independent displays, works along with discrete graphics to support up to five independent monitors; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz;</i> <i>1920x1200 (VGA)@60Hz (Reduced Blanking)</i> <i>Some: AMD Radeon™ HD 8470</i> , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one VGA, one DisplayPort, 25 watts, <i>Max resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm, 3.5" wide			
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1 support			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 6.0Gb/s connectors, one eSATA connector (SATA 6.0Gb/s)			
eSATA port	None			
Media reader	None			
Chipset	Intel Q87 Express Chipset			
Front ports	Two USB 3.0, two optional USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 3.0, two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), ethernet (RJ-45), one VGA, two DisplayPort, additional VGA, DisplayPort, or HDMI ports on optional graphic card on some models			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1			
Bluetooth	None			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio (1.5 watt)			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®			
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)			
Modem	None			
Security chip	Trusted Platform Module (TPM1.2-compliant)			
Keyboard	Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	280 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Mini Tower (25L), business black color, metal case● (WxDxH) 6.89" X 17.41" X 16.32"; 175mm X 442.3mm X 414.5mm● 24.69 lb (11.20 kg) in maximum configuration● Toolless cover removal, adapter retention● Toolless disk, optical drive removal			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk			
Slot	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75w max) Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● Security chip (see information on left)● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant ULE Gold Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	



See footnotes for important warranty information

US model(s) announced June 18, 2013, August 20, 2013, or November 12, 2013

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(MSS1T-2) November 2013



ThinkCentre M93z (Multi-touch) with Frame Stand and optional wireless keyboard and mouse



ThinkCentre M93z (Non-touch) with Monitor Stand and optional wireless keyboard and mouse



ThinkCentre M93z with Monitor Stand with optional PS/2 and Serial ports



ThinkCentre M93z with Frame Stand with optional PS/2 and Serial ports



Frame Stand
(Adjustable between 10° and 45°)



Monitor Stand
(Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait)

ThinkCentre M93z (10AF) - TopSeller (1-year onsite)

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AF000JUS	G3220	4GBx1	2.0M	500G 7200	Intel HD	N105	None	None	None	None	Frame	USB	None	None	Win7 Pro64	DG 08/20/13

● Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Premium All-In-One PC for the enterprise Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3* , two 204-pin SODIMM sockets (notebook) *System automatically clocks down for processors with 1333MHz memory controller		Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Device Experience ● ThinkVantage AutoLock ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Lenovo Solutions for Small Business ● Nitro Pro
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort)@60Hz</i> 23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector		
Display	Optional ambient light sensor None Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Light sensor	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button		
Multi-touch	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm		
Camera	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Controls	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar		
	Optional 11-in-1 media card reader		
Disk	Intel Q87 Express Chipset		
Optical	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Onboard SATA	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Media reader	None		
Chipset	One mSATA slot		
Rear ports	One PCI Express® Mini Card slot		
Side ports	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1		
ExpressCard	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
mSATA	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
PCIe Mini Card	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
PCIe WLAN	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Bluetooth	Trusted Platform Module (TPM 1.2-compliant)		
Ethernet	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Audio support	Enhanced Optical USB Mouse, black, Lenovo logo		
Intel AMT	150 watts, autosensing, 85% PSU		
Security chip	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Non-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.6" X 17.6"; 568mm X 92.5mm X 447.3 mm● 21.3 lb (9.68 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Non-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 25.5 lb (11.58 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Keyboard	EPEAT™ Gold rating		
Mouse	ENERGY STAR® 5.2-compliant		
Power supply	TCO Certified Edge		
Machine	TUV Green Mark		
	ULE Gold		
	EuP 2013		
	Cisco EnergyWise compatible		
Limited Warranty	1-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
	GREENGUARD® certified		
	RoHS-compliant		
	Supports ThinkVantage Technologies		
	For compatible accessories, please go to TC-AQP sheet;		
	For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information
US model(s) announced August 20, 2013

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(MPHS1-16) September 2013

ThinkCentre M93z (10AF) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AF0003US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AF0004US	i5-4430S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Frame	USB	None	None	Win7 Pro64 DG	07/09/13
10AF0005US	i7-4770S	4GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AF0006US	i5-4670S	4GBx1	2.0M	500G Hybrid	HD 4600	N6235	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AF0007US	i5-4570S	4GBx1	2.0M	180G SSD	HD 4600	N2230	None	None	None	None	Frame	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AF0008US	i7-4770S	8GBx1	2.0M	500G Hybrid	HD 4600	N6235	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AF000KUS	i5-4570S	4GBx1	2.0M	128G SSD	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	09/10/13
10AF000LUS	i7-4770S	8GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	09/10/13
Positioning Processor	Premium All-In-One PC for the enterprise Intel® Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670S Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager				
Implementation	Processor in LGA1150 socket											Preloaded applications (only some listed) • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Device Experience • ThinkVantage AutoLock • Desktop Power Manager • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Microsoft Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW, DVD) • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Evernote • Intel AppUp • Lenovo Solutions for Small Business • Nitro Pro				
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)															
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 3840x2160 (DisplayPort) @60Hz</i>															
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector															
Light sensor	Optional ambient light sensor															
Multi-touch	None															
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off															
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button															
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide															
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable															
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar															
Media reader	Optional 11-in-1 media card reader															
Chipset	Intel Q87 Express Chipset															
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)															
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)															
ExpressCard	None															
mSATA	One mSATA slot															
PCIe Mini Card	One PCI Express® Mini Card slot															
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2															
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter															
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®															
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified															
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)															
Security chip	Trusted Platform Module (TPM 1.2-compliant)															
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo															
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo															
Power supply	150 watts, autosensing, 85% PSU															
Machine	<ul style="list-style-type: none"> • Business black color • Toolless back cover, stand removal • Toolless disk, optical drive, memory removal • Support VESA mount (100mm) Non-touch model(s) with frame stand: <ul style="list-style-type: none"> • (WxDxH) 22.4" X 3.6" X 17.6"; 568mm X 92.5mm X 447.3 mm • 21.3 lb (9.68 kg) in maximum configuration • Adjustable stand (between 10° and 45°) Non-touch model(s) with monitor stand: <ul style="list-style-type: none"> • (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm • 25.5 lb (11.58 kg) in maximum configuration • Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait 											EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet				

ThinkCentre M93z (10AF) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ¹	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AF000FUS	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	None	None	None	None	Monitor	USB	None	None	Win7 Pro64 DG	08/20/13
10AF000GUS	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	None	None	None	None	Frame	USB	None	None	Win7 Pro64 DG	08/20/13
10AF000HUS	i3-4130	4GBx1	2.0M	500G Hybrid	HD 4400	N2230	Media	None	None	None	Monitor	USB	None	None	Win7 Pro64 DG	08/20/13
10AF000VUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	None	USB	vPro	None	Win7 Pro64 DG	11/12/13
10AF000WUS	i7-4770S	8GBx1	2.0M	256G SSD	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	11/12/13
10AF0010US	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N7260	None	None	None	None	Monitor	USB	None	None	Win7 P64 DG	Win8.1 01/21/14
10AF0011US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N7260	None	None	None	None	Monitor	USB	vPro	None	Win7 P64 DG	Win8.1 01/21/14

Positioning Processor	<i>Premium All-In-One PC for the enterprise</i> Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit					
Implementation												Ready to install applications (only some listed)					
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)											<ul style="list-style-type: none"> • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Device Experience • ThinkVantage AutoLock • Desktop Power Manager • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Microsoft Office preloaded; purchase a product key to activate • Cyberlink PowerDVD (DVD±RW, DVD) • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Evernote • Intel AppUp • Lenovo Solutions for Small Business • Nitro Pro 					
Graphics	Intel HD Graphics 4400/4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz																
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector																
Light sensor	Optional ambient light sensor																
Multi-touch	None																
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off																
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button																
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide																
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable																
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar																
Media reader	Optional 11-in-1 media card reader																
Chipset	Intel Q87 Express Chipset																
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)																
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)																
ExpressCard	None																
mSATA	One mSATA slot																
PCIe Mini Card	One PCI Express® Mini Card slot																
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2																
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter																
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®																
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified																
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)																
Security chip	Trusted Platform Module (TPM 1.2-compliant)																
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo																
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo																
Power supply	150 watts, autosensing, 85% PSU																
Machine	<ul style="list-style-type: none"> • Business black color • Toolless back cover, stand removal • Toolless disk, optical drive, memory removal • Support VESA mount (100mm) <i>Non-touch model(s) with frame stand:</i> <ul style="list-style-type: none"> • (WxDxH) 22.4" X 3.6" X 17.6"; 568mm X 92.5mm X 447.3 mm • 21.3 lb (9.68 kg) in maximum configuration • Adjustable stand (between 10° and 45°) <i>Non-touch model(s) with monitor stand:</i> <ul style="list-style-type: none"> • (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm • 25.5 lb (11.58 kg) in maximum configuration • Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait 											EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies					
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information

US model(s) announced August 20 or November 12, 2013 or January 21, 2014

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(MPHS1-15) January 2014

ThinkCentre M93z (10AD) - Multi-touch (TopSeller) - 1-year onsite

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AD001HUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Frame	USB	vPro	None	Win7 Pro64	DG 08/13/13
10AD001MUS	G3220	4GBx1	2.0M	500G 7200	Intel HD	N105	None	None	None	None	Frame	USB	None	None	Win7 Pro64	DG 08/20/13

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	<i>Premium All-In-One PC for the enterprise</i> Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket	Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Lenovo Solutions for Small Business● Nitro Pro
Implementation		
Memory	16GB max, PC3-12800 1600MHz DDR3* , two 204-pin SODIMM sockets (notebook) *System automatically clocks down for processors with 1333MHz memory controller	
Graphics	Intel HD Graphics or HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Max resolution:</i> 3840x2160 (DP)@60Hz [HD 4x00]; 2560x1600 (DP)@60Hz [Intel HD]	
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector	
Light sensor	Optional ambient light sensor	
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off	
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button	
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar	
Media reader	Optional 11-in-1 media card reader	
Chipset	Intel Q87 Express Chipset	
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)	
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)	
ExpressCard	None	
mSATA	One mSATA slot	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2	
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter	
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®	
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified	
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)	
Security chip	Trusted Platform Module (TPM 1.2-compliant)	
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo	
Power supply	150 watts, autosensing, 85% PSU	
Machine	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm● 24.7 lb (11.22 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 28.9 lb (13.12 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait	
Limited Warranty	1-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US model(s) announced August 13, 2013 or August 20, 2013

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(MPHS1-13) September 2013

ThinkCentre M93z (10AD) - Multi-touch (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Pro-cessor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AD0001US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AD0003US	i5-4430S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Frame	USB	None	None	Win7 Pro64 DG	07/09/13
10AD0004US	i7-4770S	4GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AD0005US	i5-4570S	4GBx1	2.0M	500G Hybrid	HD 4600	N2230	None	None	None	None	Frame	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AD0008US	i7-4770S	8GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	None	None	None	Monitor	2.4G	vPro	None	Win7 Pro64 DG	07/09/13
10AD0009US	i5-4570S	4GBx1	2.0M	180G SSD	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AD001GUS	i5-4570S	4GBx1	2.0M	128G SSD	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	08/13/13

Positioning Processor	<i>Premium All-In-One PC for the enterprise</i> Intel® Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket	Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager
Implementation	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)	Preloaded applications (only some listed) • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Device Experience • ThinkVantage AutoLock • Desktop Power Manager • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Microsoft Office preloaded; purchase a product key to activate • Cyberlink PowerDVD (DVD±RW, DVD) • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Evernote • Intel AppUp • Lenovo Solutions for Small Business • Nitro Pro
Memory		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz	
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector	
Light sensor	Optional ambient light sensor	
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off	
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button	
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar	
Media reader	Optional 11-in-1 media card reader	
Chipset	Intel Q87 Express Chipset	
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)	
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)	
ExpressCard	None	
mSATA	One mSATA slot	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2	
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter	
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®	
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified	
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)	
Security chip	Trusted Platform Module (TPM 1.2-compliant)	
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), Lenovo® logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black	
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, black, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black	
Power supply	150 watts, autosensing, 85% PSU	
Machine	• Business black color • Toolless back cover, stand removal • Toolless disk, optical drive, memory removal • Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> • (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm • 24.7 lb (11.22 kg) in maximum configuration • Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> • (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm • 28.9 lb (13.12 kg) in maximum configuration • Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait	
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information
 US model(s) announced July 9, 2013 or August 13, 2013

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 (MPHS1-5) August 2013

ThinkCentre M93z (10AD) - Multi-touch (TopSeller) - II

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AD001JUS	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	None	None	None	None	Monitor	USB	None	None	Win7 Pro64 DG	08/20/13
10AD001KUS	i3-4130	4GBx1	2.0M	500G Hybrid	HD 4400	N2230	Media	None	None	None	Monitor	USB	None	None	Win7 Pro64 DG	08/20/13
10AD001LUS	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	None	None	None	None	Frame	USB	None	None	Win7 Pro64 DG	08/20/13
10AD0020US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N6235	Media	None	None	None	None	USB	vPro	None	Win7 Pro64 DG	11/12/13
10AD0021US	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	None	None	None	None	None	USB	None	None	Win7 Pro64 DG	11/12/13
10AD0022US	i5-4570S	4GBx1	2.0M	256G SSD	HD 4600	N2230	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	11/12/13

● Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Premium All-In-One PC for the enterprise Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller	Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Lenovo Solutions for Small Business● Nitro Pro
Implementation	Processor in LGA1150 socket	
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics 4400/4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz	
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector	
Light sensor	Optional ambient light sensor	
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off	
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button	
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Wide	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar	
Media reader	Optional 11-in-1 media card reader	
Chipset	Intel Q87 Express Chipset	
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)	
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)	
ExpressCard	None	
mSATA	One mSATA slot	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2	
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter	
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®	
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified	
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)	
Security chip	Trusted Platform Module (TPM 1.2-compliant)	
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo	
Power supply	150 watts, autosensing, 85% PSU	
Machine	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm● 24.7 lb (11.22 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 28.9 lb (13.12 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait	Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s)
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information
US model(s) announced August 20, 2013 or November 12, 2013

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(MPHS1-12) November 2013

ThinkCentre M93z (10AD) - Multi-touch (TopSeller) - III

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AD0024US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N7260	Media	None	None	None	Monitor	USB	vPro	None	Win7 P64 DG	Win8.1 01/21/14
10AD0025US	i7-4770S	4GBx1	2.0M	500G Hybrid	HD 4600	N7260	Media	None	None	None	Monitor	USB	vPro	None	Win7 P64 DG	Win8.1 01/21/14
10AD0026US	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N7260	None	None	None	None	Monitor	USB	None	None	Win7 P64 DG	Win8.1 01/21/14
10AD0027US	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N7260	None	None	None	None	Frame	USB	None	None	Win7 P64 DG	Win8.1 01/21/14

• Small and medium business (SMB) model(s), part of the US TopSeller™ Program

Positioning Processor	Premium All-In-One PC for the enterprise Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket										Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager Preloaded applications (only some listed) • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Device Experience • ThinkVantage AutoLock • Desktop Power Manager • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Microsoft Office preloaded; purchase a product key to activate • Cyberlink PowerDVD (DVD±RW, DVD) • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Evernote • Intel AppUp • Lenovo Solutions for Small Business • Nitro Pro						
Implementation	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)																
Graphics	Intel HD Graphics 4400/4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz 23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector																
Display	Optional ambient light sensor																
Light sensor	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch																
Multi-touch	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off																
Camera	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button																
Controls	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide																
Disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable																
Optical	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar																
Onboard SATA	Optional 11-in-1 media card reader																
Media reader	Intel Q87 Express Chipset																
Chipset	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)																
Rear ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)																
Side ports	None																
ExpressCard	One mSATA slot																
mSATA	One PCI Express® Mini Card slot																
PCIe Mini Card	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2																
PCIe WLAN	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter																
Bluetooth	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®																
Ethernet	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified																
Audio support	Intel Active Management Technology 9.0 (Intel AMT 9.0)																
Intel AMT	Trusted Platform Module (TPM 1.2-compliant)																
Security chip	Preferred Pro USB Keyboard (USB connector), Lenovo® logo																
Keyboard	Enhanced Optical USB Mouse, black, Lenovo logo																
Mouse	150 watts, autosensing, 85% PSU																
Power supply	• Business black color • Toolless back cover, stand removal • Toolless disk, optical drive, memory removal • Support VESA mount (100mm) Multi-touch model(s) with frame stand: • (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm • 24.7 lb (11.22 kg) in maximum configuration • Adjustable stand (between 10° and 45°) Multi-touch model(s) with monitor stand: • (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm • 28.9 lb (13.12 kg) in maximum configuration • Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait										EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet						
Machine																	
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available																

See footnotes for important warranty information
US model(s) announced January 21, 2014

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ThinkCentre M93z (10AD) - Multi-touch (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Pro-cessor	Memory	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AD0002US	i5-4670S	4GBx1	2.0M	500G 7200	HD 4600	N2230	Media	None	None	None	Monitor	2.4G	vPro	None	Win8 Pro64	07/09/13
10AD0006US	i7-4770S	8GBx1	2.0M	500G Hybrid	HD 4600	N2230	Media	None	None	None	Frame	2.4G	vPro	None	Win8 Pro64	07/09/13
10AD0007US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N6235	Media	None	None	None	Monitor	2.4G	vPro	None	Win8 Pro64	07/09/13
10AD001DUS	i5-4670S	4GBx1	2.0M	500G 7200	HD 4600	N2230	Media	Sensor	None	None	Monitor	USB	vPro	None	Win8 Pro64	07/23/13
10AD001EUS	i5-4670S	4GBx1	2.0M	1TB 7200	HD 4600	N2230	Media	None	None	None	Monitor	USB	vPro	None	Win8 Pro64	07/23/13
10AD001FUS	i7-4770S	8GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	Sensor	None	None	Monitor	USB	vPro	None	Win8 Pro64	07/23/13
10AD001NUS	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	Media	None	None	None	Monitor	USB	None	None	Win8 Pro64	08/20/13
Positioning Processor	Premium All-In-One PC for the enterprise Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670S Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Preloaded operating system Windows® 8 Pro 64-bit Web install applications (only some listed) • Password Manager Preloaded applications (only some listed) • ThinkVantage System Update • ThinkVantage AutoLock • Desktop Power Manager • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Support • Lenovo Companion • Norton Internet Security (30 days of virus definitions) • Skype™ • Microsoft Office preloaded; purchase a product key to activate • Cyberlink PowerDVD (DVD±RW, DVD) • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Evernote® • Intel AppUp • Lenovo Solutions for Small Business • Nitro Pro • AccuWeather • Norton™ Studio				
Implementation	Processor in LGA1150 socket											Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet				
Memory	16GB max, PC3-12800 1600MHz DDR3, two 204-pin SODIMM sockets (notebook)															
Graphics	Intel HD Graphics 4400 or 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; Maximum resolution: 3840x2160 (DisplayPort) @60Hz															
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color, IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector															
Light sensor	Optional ambient light sensor															
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch															
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off															
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button															
Disk	Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm Some: 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide															
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable															
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar															
Media reader	Optional 11-in-1 media card reader															
Chipset	Intel Q87 Express Chipset															
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)															
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)															
ExpressCard	None															
mSATA	One mSATA slot															
PCIe Mini Card	One PCI Express® Mini Card slot															
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2															
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter															
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®															
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified															
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)															
Security chip	Trusted Platform Module (TPM 1.2-compliant)															
Keyboard	Some: Preferred Pro USB Keyboard (USB connector), Lenovo® logo Some: Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black															
Mouse	Some: Enhanced Optical USB Mouse, black, Lenovo logo Some: Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black															
Power supply	150 watts, autosensing, 85% PSU															
Machine	• Business black color • Toolless back cover, stand removal • Toolless disk, optical drive, memory removal • Support VESA mount (100mm) Multi-touch model(s) with frame stand: • (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm • 24.7 lb (11.22 kg) in maximum configuration • Adjustable stand (between 10° and 45°) Multi-touch model(s) with monitor stand: • (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm • 28.9 lb (13.12 kg) in maximum configuration • Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait															
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available															

ThinkCentre M93z (10AD) - Multi-touch (TopSeller) - Windows 8.1

Product Specifications Reference (PSREF)

Type-model	Pro-cessor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AD0028US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N7260	Media	Sensor	None	None	Frame	USB	vPro	None	Win8.1 Pro64	01/21/14
10AD0029US	i5-4670S	4GBx1	2.0M	500G 7200	HD 4600	N7260	Media	Sensor	None	None	Monitor	USB	vPro	None	Win8.1 Pro64	01/21/14

Positioning	<i>Premium All-In-One PC for the enterprise</i>											Preloaded operating system				
Processor	Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4670S Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Windows® 8.1 Pro 64-bit				
Implementation												Web install applications (only some listed)				
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)											• Password Manager				
Graphics	Intel HD Graphics 4400 or 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 3840x2160 (DisplayPort)@60Hz</i>											Preloaded applications (only some listed)				
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector											• ThinkVantage System Update				
Light sensor	Optional ambient light sensor											• ThinkVantage AutoLock				
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch											• Desktop Power Manager				
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off											• Lenovo Solution Center				
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button											• Lenovo Support				
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm											• Lenovo Companion				
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable											• Norton Internet Security (30 days of virus definitions)				
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar											• Skype™				
Media reader	Optional 11-in-1 media card reader											• Microsoft Office preloaded; purchase a product key to activate				
Chipset	Intel Q87 Express Chipset											• Cyberlink PowerDVD (DVD±RW, DVD)				
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)											• Cyberlink Power2Go (DVD±RW)				
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)											• Cyberlink PowerProducer (DVD±RW)				
ExpressCard	None											• Evernote®				
mSATA	One mSATA slot											• Intel AppUp				
PCIe Mini Card	One PCI Express® Mini Card slot											• Lenovo Solutions for Small Business				
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2											• Nitro Pro				
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter											• AccuWeather				
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®											• Norton™ Studio				
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified											• Pokki				
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)											• Hightail				
Security chip	Trusted Platform Module (TPM 1.2-compliant)											Security				
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), Lenovo® logo											• Security chip (see information on left)				
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, black, Lenovo logo											• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)				
Power supply	<i>Some:</i> Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black											• Power-on password				
Machine	150 watts, autosensing, 85% PSU											• Administrator password				
	<ul style="list-style-type: none"> • Business black color • Toolless back cover, stand removal • Toolless disk, optical drive, memory removal • Support VESA mount (100mm) 											• Boot sequence control				
	<i>Multi-touch model(s) with frame stand:</i>											• Boot without keyboard and mouse				
	<ul style="list-style-type: none"> • (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm • 24.7 lb (11.22 kg) in maximum configuration • Adjustable stand (between 10° and 45°) 											• USB port disablement				
	<i>Multi-touch model(s) with monitor stand:</i>											• Chassis intrusion switch on selected model(s)				
	<ul style="list-style-type: none"> • (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm • 28.9 lb (13.12 kg) in maximum configuration • Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait 											EPEAT™ Gold rating				
												ENERGY STAR® 5.2-compliant				
												TCO Certified Edge				
												TUV Green Mark				
												ULE Gold				
												EuP 2013				
												Cisco EnergyWise compatible				
												GREENGUARD® certified				
												RoHS-compliant				
												Supports ThinkVantage Technologies				
												For compatible accessories, please go to TC-AQP sheet;				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											For Lenovo service upgrade options, please go to S-TC sheet				

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AE000FUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AE000GUS	i7-4770S	4GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AE000HUS	i5-4430S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Frame	USB	None	None	Win7 Pro64 DG	07/09/13
10AE000YUS	i5-4570S	4GBx1	2.0M	500G Hybrid	HD 4600	N2230	Media	None	None	None	Frame	USB	vPro	None	Win7 Pro64 DG	07/09/13

●3-year limited warranty

Positioning Processor	Premium All-In-One PC for the enterprise Intel® Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket	Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Lenovo Solutions for Small Business● Nitro Pro
Implementation		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz	
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector Optional ambient light sensor	
Light sensor	Optional ambient light sensor	
Multi-touch	None	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off	
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button	
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar	
Media reader	Optional 11-in-1 media card reader	
Chipset	Intel Q87 Express Chipset	
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)	
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)	
ExpressCard	None	
mSATA	One mSATA slot	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2	
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter	
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®	
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified Intel Active Management Technology 9.0 (Intel AMT 9.0)	
Intel AMT	Trusted Platform Module (TPM 1.2-compliant)	
Security chip		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo	
Power supply	150 watts, autosensing, 85% PSU	
Machine	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Non-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.6" X 17.6"; 568mm X 92.5mm X 447.3 mm● 21.3 lb (9.68 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Non-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 25.5 lb (11.58 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait	
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	

ThinkCentre M93z (10AE) - II

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AE001GUS	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	None	None	None	None	Monitor	USB	None	None	Win7 Pro64	DG 08/20/13
10AE001HUS	G3220	4GBx1	2.0M	500G 7200	Intel HD	N105	None	None	None	None	Frame	USB	None	None	Win7 Pro64	DG 08/20/13
10AE001JUS	i3-4130	4GBx1	2.0M	500G Hybrid	HD 4400	N2230	None	None	None	None	Monitor	USB	None	None	Win7 Pro64	DG 08/20/13

●3-year limited warranty

Positioning Processor	<i>Premium All-In-One PC for the enterprise</i> Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Processor in LGA1150 socket	Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Lenovo Solutions for Small Business● Nitro Pro
Implementation	Processor in LGA1150 socket	
Memory	16GB max, PC3-12800 1600MHz DDR3* , two 204-pin SODIMM sockets (notebook) *System automatically clocks down for processors with 1333MHz memory controller	
Graphics	Intel HD Graphics or HD Graphics 4400 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Max resolution:</i> 3840x2160 (DP)@60Hz [HD 4x00]; 2560x1600 (DP)@60Hz [Intel HD]	
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector	
Light sensor	Optional ambient light sensor	
Multi-touch	None	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off	
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button	
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar	
Media reader	Optional 11-in-1 media card reader	
Chipset	Intel Q87 Express Chipset	
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)	
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)	
ExpressCard	None	
mSATA	One mSATA slot	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2	
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter	
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®	
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified	
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)	
Security chip	Trusted Platform Module (TPM 1.2-compliant)	
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo	
Power supply	150 watts, autosensing, 85% PSU	
Machine	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Non-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.6" X 17.6"; 568mm X 92.5mm X 447.3 mm● 21.3 lb (9.68 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Non-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 25.5 lb (11.58 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait	EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	

See footnotes for important warranty information
US model(s) announced August 20, 2013

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ThinkCentre M93z (10AE) - GMP

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/Mouse	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AE001FUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win7 Pro64	07/09/13
10AE001DUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N6235	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win7 P64 DG Win8	07/09/13
10AE0022US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N7260	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win7 P64 DG Win8.1	02/25/14

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- 3-year limited warranty

Positioning	<i>Premium All-In-One PC for the enterprise</i>										Preloaded operating system					
Processor	Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology										<i>Some:</i> Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit					
Implementation	Processor in LGA1150 socket										<i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit					
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)										Ready to install applications (only some listed)					
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz										<ul style="list-style-type: none"> ● Rescue and Recovery™ ● Password Manager 					
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector										Preloaded applications (only some listed)					
Light sensor	Optional ambient light sensor										<ul style="list-style-type: none"> ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Device Experience ● ThinkVantage AutoLock ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Lenovo Solutions for Small Business ● Nitro Pro 					
Multi-touch	None										Security					
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off										<ul style="list-style-type: none"> ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● USB port disablement ● Chassis intrusion switch on selected model(s) 					
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button										EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant					
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm										Supports ThinkVantage Technologies					
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable										For compatible accessories, please go to TC-AQP sheet;					
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar										For Lenovo service upgrade options, please go to S-TC sheet					
Media reader	Optional 11-in-1 media card reader															
Chipset	Intel Q87 Express Chipset															
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)															
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)															
ExpressCard	None															
mSATA	One mSATA slot															
PCIe Mini Card	One PCI Express® Mini Card slot															
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2															
	<i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2															
	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2															
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter															
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®															
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified															
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)															
Security chip	Trusted Platform Module (TPM 1.2-compliant)															
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo															
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo															
Power supply	150 watts, autosensing, 85% PSU															
Machine	<ul style="list-style-type: none"> ● Business black color ● Toolless back cover, stand removal ● Toolless disk, optical drive, memory removal ● Support VESA mount (100mm) <i>Non-touch model(s) with frame stand:</i> <ul style="list-style-type: none"> ● (WxDxH) 22.4" X 3.6" X 17.6"; 568mm X 92.5mm X 447.3 mm ● 21.3 lb (9.68 kg) in maximum configuration ● Adjustable stand (between 10° and 45°) <i>Non-touch model(s) with monitor stand:</i> <ul style="list-style-type: none"> ● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm ● 25.5 lb (11.58 kg) in maximum configuration ● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait 															
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available															

See footnotes for important warranty information
US model(s) announced July 9, 2013 or February 25, 2014

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ThinkCentre M93z (10AE) - GMP (Windows 8/8.1)

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AE001EUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win8 Pro64	07/09/13
10AE0023US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N7260	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win8.1 Pro64	02/25/14

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- 3-year limited warranty

Positioning Processor	<i>Premium All-In-One PC for the enterprise</i> Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		Preloaded operating system <i>Some:</i> Windows® 8 Pro 64-bit <i>Some:</i> Windows 8.1 Pro 64-bit Web install applications (only some listed) <ul style="list-style-type: none">● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage System Update● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility (for Windows 8 only)● Lenovo Cloud Storage by SugarSync (for Windows 8 only)● Lenovo Solution Center● Lenovo Support● Lenovo Companion● Norton Internet Security (30 days of virus definitions)● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote®● Intel AppUp● Lenovo Solutions for Small Business● Nitro Pro● AccuWeather● Norton™ Studio● Pokki (for Windows 8.1 only)● Hightail (for Windows 8.1 only)
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 3840x2160 (DisplayPort) @60Hz</i>		
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector		
Light sensor	Optional ambient light sensor		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button		
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar		
Media reader	Optional 11-in-1 media card reader		
Chipset	Intel Q87 Express Chipset		
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
ExpressCard	None		
mSATA	One mSATA slot		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Non-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.6" X 17.6"; 568mm X 92.5mm X 447.3 mm● 21.3 lb (9.68 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Non-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 25.5 lb (11.58 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced July 9, 2013 or February 25, 2014

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ThinkCentre M93z (10AC) - Multi-touch

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AC000GUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AC000HUS	i7-4770S	4GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	None	None	None	Monitor	USB	vPro	None	Win7 Pro64 DG	07/09/13
10AC000JUS	i5-4430S	4GBx1	2.0M	500G 7200	HD 4600	N2230	None	None	None	None	Frame	USB	None	None	Win7 Pro64 DG	07/09/13
10AC0011US	i7-4770S	8GBx1	2.0M	500G Hybrid	HD 4600	N2230	Media	None	None	None	Monitor	2.4G	vPro	None	Win7 Pro64 DG	07/09/13

●3-year limited warranty

Positioning	Premium All-In-One PC for the enterprise		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Lenovo Solutions for Small Business● Nitro Pro Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch on selected model(s) EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Processor	Intel® Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 3840x2160 (DisplayPort)@60Hz</i> 23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector		
Display	Optional ambient light sensor		
Light sensor	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch		
Multi-touch	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Camera	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button		
Controls	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide		
Disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Optical	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar		
Onboard SATA	Optional 11-in-1 media card reader		
Media reader	Intel Q87 Express Chipset		
Chipset	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Chipset	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
Rear ports	None		
Side ports	One mSATA slot		
ExpressCard	One PCI Express® Mini Card slot		
mSATA	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
PCIe Mini Card	<i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2		
PCIe WLAN	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Bluetooth	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Ethernet	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Audio support	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Intel AMT	Trusted Platform Module (TPM 1.2-compliant)		
Security chip	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Keyboard	<i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black		
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	<i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black		
Machine	150 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm● 24.7 lb (11.22 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 28.9 lb (13.12 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced July 9, 2013

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ThinkCentre M93z (10AC) - Multi-touch - II

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial port	Chassis intrusion switch	Stand type	Key-board/Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AC001JUS	i3-4130	4GBx1	2.0M	500G 7200	HD 4400	N2230	None	None	None	None	Monitor	USB	None	None	Win7 Pro64	DG 08/20/13
10AC001KUS	i3-4130	4GBx1	2.0M	500G Hybrid	HD 4400	N2230	None	None	None	None	Monitor	USB	None	None	Win7 Pro64	DG 08/20/13
10AC001LUS	G3220	4GBx1	2.0M	500G 7200	Intel HD	N105	None	None	None	None	Frame	USB	None	None	Win7 Pro64	DG 08/20/13

●3-year limited warranty

Positioning Processor	Premium All-In-One PC for the enterprise Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache) , integrated Intel HD Graphics 4400, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Intel AppUp● Lenovo Solutions for Small Business● Nitro Pro
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3* , two 204-pin SODIMM sockets (notebook) *System automatically clocks down for processors with 1333MHz memory controller		
Graphics	Intel HD Graphics or HD Graphics 4400 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Max resolution:</i> 3840x2160 (DP) @60Hz [HD 4x00]; 2560x1600 (DP) @60Hz [Intel HD]		
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector		
Light sensor	Optional ambient light sensor		
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button		
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar		
Media reader	Optional 11-in-1 media card reader		
Chipset	Intel Q87 Express Chipset		
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
ExpressCard	None		
mSATA	One mSATA slot		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 105, 1x1 <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color● Toolless back cover, stand removal● Toolless disk, optical drive, memory removal● Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm● 24.7 lb (11.22 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 28.9 lb (13.12 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced August 20, 2013

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(MPHS1-11) September 2013

ThinkCentre M93z (10AC) - Multi-touch (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global	Preload	Ann date (mm/dd/yy)
10AC0010US	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N6235	Media	None	None	None	Monitor	2.4G	vPro	None	Win8 Pro64	07/09/13
10AC001HUS	i7-4770S	8GBx1	2.0M	1TB 7200	HD 4600	N6235	Media	Sensor	None	None	Monitor	USB	vPro	None	Win8 Pro64	08/13/13

●3-year limited warranty

Positioning Processor	<i>Premium All-In-One PC for the enterprise</i> Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1150 socket	Preloaded operating system Windows® 8 Pro 64-bit Web install applications (only some listed) ● Password Manager Preloaded applications (only some listed) ● ThinkVantage System Update ● ThinkVantage AutoLock ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Support ● Lenovo Companion ● Norton Internet Security (30 days of virus definitions) ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote® ● Intel AppUp ● Lenovo Solutions for Small Business ● Nitro Pro ● AccuWeather ● Norton™ Studio	
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz		
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector		
Light sensor	Optional ambient light sensor		
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button		
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar		
Media reader	Optional 11-in-1 media card reader		
Chipset	Intel Q87 Express Chipset		
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)		
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)		
ExpressCard	None		
mSATA	One mSATA slot		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	<i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6235, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®		
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)		
Security chip	Trusted Platform Module (TPM 1.2-compliant)		
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), Lenovo® logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black		
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, black, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black		
Power supply	150 watts, autosensing, 85% PSU		
Machine	● Business black color ● Toolless back cover, stand removal ● Toolless disk, optical drive, memory removal ● Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm● 24.7 lb (11.22 kg) in maximum configuration● Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> <ul style="list-style-type: none">● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm● 28.9 lb (13.12 kg) in maximum configuration● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait	Security ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● USB port disablement ● <i>Chassis intrusion switch on selected model(s)</i>	
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		EPEAT™ Gold rating ENERGY STAR® 5.2-compliant TCO Certified Edge TUV Green Mark ULE Gold EuP 2013 Cisco EnergyWise compatible GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information
US model(s) announced July 9, 2013 or August 13, 2013

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ThinkCentre M93z (10AC) - Multi-touch (GMP)

Product Specifications Reference (PSREF)

Type-model	Pro-cessor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/Mouse	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AC001GUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win7 Pro64	07/09/13
10AC001EUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N6235	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win7 P64 DG Win8	07/09/13
10AC002CUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N7260	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win7 P64 DG Win8.1	02/25/14

●Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty

●3-year limited warranty

Positioning	<i>Premium All-In-One PC for the enterprise</i>											Preloaded operating system				
Processor	Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology											<i>Some:</i> Windows® 7 Professional 64				
Implementation	Processor in LGA1150 socket											<i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit				
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)											<i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit				
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 3840x2160 (DisplayPort)@60Hz											Ready to install applications (only some listed)				
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector											<ul style="list-style-type: none"> ● Rescue and Recovery™ ● Password Manager 				
Light sensor	Optional ambient light sensor											Preloaded applications (only some listed)				
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch											<ul style="list-style-type: none"> ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Device Experience ● ThinkVantage AutoLock ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Intel AppUp ● Lenovo Solutions for Small Business ● Nitro Pro 				
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off											Security				
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button											<ul style="list-style-type: none"> ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● USB port disablement ● Chassis intrusion switch on selected model(s) 				
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm											EPEAT™ Gold rating				
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable											ENERGY STAR® 5.2-compliant				
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar											TCO Certified Edge				
Media reader	Optional 11-in-1 media card reader											TUV Green Mark				
Chipset	Intel Q87 Express Chipset											ULE Gold				
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)											EuP 2013				
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)											Cisco EnergyWise compatible				
ExpressCard	None											GREENGUARD® certified				
mSATA	One mSATA slot											RoHS-compliant				
PCIe Mini Card	One PCI Express® Mini Card slot											Supports ThinkVantage Technologies				
PCIe WLAN	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2											For compatible accessories, please go to TC-AQP sheet;				
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter											For Lenovo service upgrade options, please go to S-TC sheet				
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®															
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified															
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)															
Security chip	Trusted Platform Module (TPM 1.2-compliant)															
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo															
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo															
Power supply	150 watts, autosensing, 85% PSU															
Machine	<ul style="list-style-type: none"> ● Business black color ● Toolless back cover, stand removal ● Toolless disk, optical drive, memory removal ● Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> <ul style="list-style-type: none"> ● (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm ● 24.7 lb (11.22 kg) in maximum configuration ● Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> <ul style="list-style-type: none"> ● (WxDxH) 22.4" X 9.7" X 17.4"; 568mm X 247mm X 441.2mm to 551.2mm ● 28.9 lb (13.12 kg) in maximum configuration ● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait 															
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available															

See footnotes for important warranty information
US model(s) announced July 9, 2013 or February 25, 2104

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ThinkCentre M93z (10AC) - Multi-touch (GMP) - Windows 8/8.1

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Light sensor	Serial & PS/2 port	Chassis intrusion switch	Stand type	Key-board/ Mouse	Intel vPro	Global (G) GMP (P)	Preload	Ann date (mm/dd/yy)
10AC001FUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N2230	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win8 Pro64	07/09/13
10AC002DUS	i5-4570S	4GBx1	2.0M	500G 7200	HD 4600	N7260	Media	Sensor	None	Switch	Monitor	USB	vPro	G P	Win8.1 Pro64	02/25/14

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- 3-year limited warranty

Positioning	<i>Premium All-In-One PC for the enterprise</i>											Preloaded operating system				
Processor	Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD Graphics 4600, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology											<i>Some: Windows® 8 Pro 64-bit</i> <i>Some: Windows 8.1 Pro 64-bit</i>				
Implementation	Processor in LGA1150 socket											Web install applications (only some listed)				
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)											● Password Manager				
Graphics	Intel HD Graphics 4600 in processor, uses main memory, DirectX® 11, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 3840x2160 (DisplayPort) @60Hz</i>											Preloaded applications (only some listed)				
Display	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , IPS panel, wide viewing angle (+/- 89°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, anti-glare, work as standalone monitor via VGA-in connector											● ThinkVantage System Update				
Light sensor	Optional ambient light sensor											● ThinkVantage AutoLock				
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch											● Desktop Power Manager				
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off											● View Management Utility (for Windows 8 only)				
Controls	Microphone mute (OSD exit), monitor mode switch (OSD enter), volume up/down buttons (OSD left/right buttons), and power button											● Lenovo Cloud Storage by SugarSync (for Windows 8 only)				
Disk	<i>Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm</i>											● Lenovo Solution Center				
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable											● Lenovo Support				
Onboard SATA	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors on planar											● Norton Internet Security (30 days of virus definitions)				
Media reader	Optional 11-in-1 media card reader											● Skype™				
Chipset	Intel Q87 Express Chipset											● Microsoft Office preloaded; purchase a product key to activate				
Rear ports	Four USB 3.0, ethernet (RJ-45), DisplayPort-out, VGA-in, optional serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2)											● Cyberlink PowerDVD (DVD±RW, DVD)				
Side ports	Two USB 3.0 (one Always On / Powered), one microphone (stereo, 3.5mm), one headphone / microphone combo jack (stereo, 3.5mm)											● Cyberlink Power2Go (DVD±RW)				
ExpressCard	None											● Cyberlink PowerProducer (DVD±RW)				
mSATA	One mSATA slot											● Evernote®				
PCIe Mini Card	One PCI Express® Mini Card slot											● Intel AppUp				
PCIe WLAN	<i>Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2</i> <i>Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2</i>											● Lenovo Solutions for Small Business				
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter											● Nitro Pro				
Ethernet	One gigabit ethernet port, Intel I217-LM (Clarkville), Wake on LAN®											● AccuWeather				
Audio support	High Definition (HD) Audio, Realtek ALC283 / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified											● Norton™ Studio				
Intel AMT	Intel Active Management Technology 9.0 (Intel AMT 9.0)											● Pokki (for Windows 8.1 only)				
Security chip	Trusted Platform Module (TPM 1.2-compliant)											● Hightail (for Windows 8.1 only)				
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo											Security				
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo											● Security chip (see information on left)				
Power supply	150 watts, autosensing, 85% PSU											● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)				
Machine	<ul style="list-style-type: none"> ● Business black color ● Toolless back cover, stand removal ● Toolless disk, optical drive, memory removal ● Support VESA mount (100mm) <i>Multi-touch model(s) with frame stand:</i> <ul style="list-style-type: none"> ● (WxDxH) 22.4" X 3.7" X 17.6"; 568mm X 93.1mm X 447.3 mm ● 24.7 lb (11.22 kg) in maximum configuration ● Adjustable stand (between 10° and 45°) <i>Multi-touch model(s) with monitor stand:</i> <ul style="list-style-type: none"> ● (WxDxH) 22.4" X 9.7" X 17.4" to 21.7"; 568mm X 247mm X 441.2mm to 551.2mm ● 28.9 lb (13.12 kg) in maximum configuration ● Tilt: 45° back, -5° forward; Lift: 110mm; Swivel: +/-45°; Pivot: Landscape / Portrait 											● Power-on password				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											● Administrator password				
												● Hard disk password				
												● Boot sequence control				
												● Boot without keyboard and mouse				
												● USB port disablement				
												● Chassis intrusion switch on selected model(s)				
												EPEAT™ Gold rating				
												ENERGY STAR® 5.2-compliant				
												TCO Certified Edge				
												TUV Green Mark				
												ULE Gold				
												EuP 2013				
												Cisco EnergyWise compatible				
												GREENGUARD® certified				
												RoHS-compliant				
												Supports ThinkVantage Technologies				
												For compatible accessories, please go to TC-AQP sheet;				
												For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information
US model(s) announced July 9, 2013 or February 25, 2104

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Lenovo ThinkCentre Edge 62z with Frame Stand



Lenovo ThinkCentre Edge 62z with Frame Stand



Lenovo ThinkCentre Edge 62z with Frame Stand



Handle



Lenovo ThinkCentre Edge 62z with Frame Stand



Lenovo ThinkCentre Edge 62z with Frame Stand

ThinkCentre Edge 62z (2117) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory ^a	Camera	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Stand type	Global	Preload	Ann date (mm/dd/yy)
2117-BBU	i3-3220	4GBx1 1600MHz	720p	500G 7200	DVD±RW	HD 2500	Intel 105	Frame	None	Win7 Pro64	03/26/13
2117-EKU	G2020	2GBx1 1600MHz	720p	500G 7200	DVD±RW	Intel HD	Intel 105	Frame	None	Win7 Pro64	03/26/13
2117-ELU	G2020	2GBx1 1600MHz	720p	500G 7200	None	Intel HD	Intel 105	Frame	None	Win7 Pro64	03/26/13
2117-EWU	i3-3240	2GBx1 1600MHz	720p	320G 5400	DVD±RW	HD 2500	Intel 105	Frame	None	Win7 Pro64	05/14/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning Processor	<i>Essential All-In-One PC for small/medium businesses</i> Intel® Pentium® G2020 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i3-3240 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system²⁰ Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager● Lenovo® Message Center Plus Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Automatic Lock Utility● ThinkVantage Power Manager● View Management Utility● Lenovo Solution Center● RapidBoot HDD Accelerator● Lenovo SimpleTap● Lenovo Cloud Storage by SugarSync● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Evernote®● Symantec™ VIP● Intel AppUp®● Nitro PDF Pro● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in LGA1155 socket		
Memory	8GB max, PC3-12800 1600MHz DDR3 , one 204-pin SODIMM sockets (notebook) <i>System automatically clocks down for processors with 1333MHz DDR3 memory controller</i>		
Graphics Display	Intel HD Graphics or Intel HD Graphics 2500 in processor, uses system memory 18.5" (470mm) HD (1366x768) TFT color , CCFL backlight, 200 nits, 16:9 aspect ratio, 600:1 dynamic contrast ratio		
Multi-touch	None		
Camera	HD720p Camera on top of screen, 1.0-megapixel, fixed focus		
Controls	Front facing button for power on/off, side buttons for brightness up and brightness down		
Disk	Hard Disk Drive / SATA 3.0Gb/s, 2.5" Wide		
Optical	<i>Some:</i> DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Media reader	None		
Chipset	Intel H61 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), serial (9-pin)		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® wireless-N 105, 1x1		
Bluetooth	None		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VC		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2watt x 2)		
Intel AMT	None		
Security chip	None		
Keyboard	Lenovo® Slim New F5 USB Keyboard (USB connector), black		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	120 watts, autosensing, 87% PSU		
Machine	<i>Model(s) with Frame stand:</i> <ul style="list-style-type: none">● Business black color● 18.5" W X 2.3" D X 14.5" H● 469.7mm W X 59.5mm D X 368.4mm H (including stand)● 11 lb (5 kg) in maximum configuration● Tilt: 10°-20° back; no lift; no swivel; adjustable stand● Supports VESA mount (100mm)		
Limited Warranty	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

Security <ul style="list-style-type: none">● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● USB port disablement
ENERGY STAR® 5.2-compliant EuP 2013 RoHS-compliant
Supports ThinkVantage Technologies
For compatible accessories, please go to O-Edge62Z sheet; For Lenovo service upgrade options, please go to S-TC sheet

ThinkCentre Edge 72 Small and Tower

ThinkCentre®



Lenovo ThinkCentre Edge 72 Small and
Lenovo ThinkCentre Edge 72 Tower



Lenovo ThinkCentre Edge 72 Small
with Dual Lenovo ThinkVision Monitors



Lenovo ThinkCentre Edge 72 Small



Lenovo ThinkCentre Edge 72 Small



Lenovo ThinkCentre Edge 72 Tower



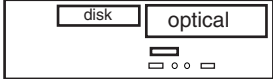
Lenovo ThinkCentre Edge 72 Tower

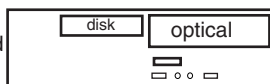
ThinkCentre Edge 72 Small (3493) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Blue-tooth	Media reader	Parallel port	Serial port	Floor stand	Global	Win7 preload	Ann date (mm/dd/yy)
3493-A7U	3x2	G630	2GBx1 1600MHz	250G 7200	DVD±RW	HD 7350	None	None	None	Parallel	Serial	Stand	None	Pro 64	06/19/12
3493-A8U	3x2	i3-2120	4GBx1 1600MHz	500G 7200	DVD±RW	HD 7350	None	None	None	Parallel	Serial	Stand	None	Pro 64	06/19/12
3493-EKU	3x2	G640	4GBx1 1600MHz	500G 7200	DVD±RW	Intel HD	None	None	None	None	Serial	Stand	None	Pro 64	07/10/12
3493-F8U	3x2	G640	2GBx1 1600MHz	500G 7200	DVD±RW	Intel HD	None	None	None	None	Serial	Stand	None	Pro 64	07/17/12
3493-BNU	3x2	G640	2GBx1 1600MHz	250G 7200	DVD±RW	Intel HD	None	None	None	Parallel	Serial	Stand	None	Pro 64	08/14/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G640 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Power Manager● ThinkVantage Communication Utility● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets			
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (VGA)@60Hz; 1920x1200 (DVI-D)@60Hz <i>Some:</i> AMD Radeon™ HD 7350 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort™, 30 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz; works along with Intel HD Graphics to support up to four independent monitors			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
PCIe WLAN	None			
Bluetooth	None			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	180 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 13.2" W X 15.0" D X 3.9" H● 336mm W X 382mm D X 101mm H● 13.2 lb (6.0 kg) in maximum configuration● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
Limited Warranty¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			



See footnotes for important warranty information
 US model(s) announced June 19, July 10, July 17, or August 14, 2012
 < US models withdrawn effective August 2012

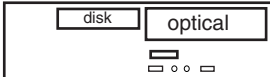
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 (TAPI1-1) August 2012

ThinkCentre Edge 72 Small (3493) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Blue-tooth	Media reader	Parallel port	Serial port	Floor stand	Win7 Global preload	Ann date (mm/dd/yy)
3493-A6U	3x2	i5-3550S	4GBx1 1600MHz	1TB 7200	DVD±RW	HD 7350	None	None	None	Parallel	Serial	Stand	None Pro 64	06/19/12
3493-B7U	3x2	i5-3470S	4GBx1 1600MHz	500G 7200	DVD±RW	HD 2500	None	None	None	None	None	Stand	None Pro 64	06/19/12
3493-EJU	3x2	i5-3470S	4GBx1 1600MHz	500G 7200	DVD±RW	HD 2500	None	None	None	None	Serial	Stand	None Pro 64	07/10/12
3493-BKU	3x2	i3-3220	4GBx1 1600MHz	500G 7200	DVD±RW	HD 2500	None	None	None	Parallel	None	Stand	None Pro 64	09/04/12
3493-BPU	3x2	i3-3220	4GBx1 1600MHz	500G 7200	DVD±RW	HD 2500	None	None	None	Parallel	Serial	Stand	None Pro 64	09/04/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller Intel Core i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache) , Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3550S Processor (4 cores / 4 threads, 3.0GHz, 6MB cache) , Turbo Boost 2.0 (3.7GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Power Manager● ThinkVantage Communication Utility● View Management Utility● Lenovo Solution Center● Lenovo Message Center Plus● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets			
Graphics	<i>Some:</i> Intel HD Graphics 2500 in processor, uses main memory, DirectX® 11, one VGA, one DVI-D, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (VGA)@60Hz; 1920x1200 (DVI-D)@60Hz <i>Some:</i> AMD Radeon™ HD 7350 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort™, 30 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz; works along with Intel HD Graphics to support up to four independent monitors			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
PCIe WLAN	None			
Bluetooth	None			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	180 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 13.2" W X 15.0" D X 3.9" H● 336mm W X 382mm D X 101mm H● 13.2 lb (6.0 kg) in maximum configuration● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
Limited Warranty¹	1-year, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-Edge72 sheet; For Lenovo service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

US model(s) announced June 19, July 10, or September 4, 2012

⚠ US models withdrawn effective August 2012

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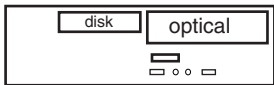
(TAPI1-2) September 2012

ThinkCentre Edge 72 Small (3493) - TopSeller (Win 8)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Blue-tooth	Media reader	Parallel port	Serial port	Floor stand	Global	Preload	Ann date (mm/dd/yy)
3493-DFU	3x2	G640	4GBx1 1600MHz	500G 7200	DVD	Intel HD	None	None	None	None	Serial	Stand	None	Win7 Pro64	10/23/12
3493-DGU	3x2	G640	4GBx1 1600MHz	500G 7200	DVD	Intel HD	None	None	None	Parallel	Serial	Stand	None	Win7 Pro64	10/23/12
3493-GPU	3x2	i3-3220	4GBx1 1600MHz	500G 7200	DVD±RW	HD 2500	None	None	None	Parallel	Serial	Stand	None	Win7 Pro64	11/20/12
3493-GRU	3x2	G645	2GBx1 1600MHz	500G 7200	DVD±RW	Intel HD	None	None	None	Parallel	Serial	Stand	None	Win7 Pro64	11/20/12
3493-H5U	3x2	G2120	4GBx1 1600MHz	500G 7200	DVD±RW	Intel HD	None	None	None	Parallel	Serial	Stand	None	Win7 Pro64	12/25/12
3493-HAU	3x2	G2020	2GBx1 1600MHz	500G 7200	DVD±RW	Intel HD	None	None	None	Parallel	Serial	Stand	None	Win7 Pro64	02/19/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Stylish design, reliability, and productivity for small/medium businesses										Preloaded operating system									
Processor	Intel® Pentium® G640 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G645 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G2020 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G2120 Processor (2 cores / 2 threads, 3.1GHz, 3MB cache), integrated Intel HD Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller Processor in LGA1155 socket										Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Communication Utility• View Management Utility• Lenovo® Solution Center• Lenovo Message Center Plus• Lenovo SimpleTap• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft® Office preloaded; purchase a product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)									
Implementation	Processor in LGA1155 socket																			
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets <i>System automatically clocks down for processors with 1066MHz DDR3 memory controller</i>																			
Graphics	Intel HD Graphics or Intel HD Graphics 2500 in processor, uses main memory, one VGA, one DVI-D, supports dual independent display; <i>Maximum resolution: 2560x1600 (VGA)@60Hz; 1920x1200 (DVI-D)@60Hz</i>																			
DP dongle	None																			
Disk	SATA 3.0Gb/s 7200 rpm																			
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset																			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar																			
eSATA port	None																			
Media reader	None																			
Chipset	Intel H61 Express Chipset																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)																			
PCIe WLAN	None																			
Bluetooth	None																			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																			
Speaker	Internal speaker for business audio																			
IEEE 1394	None																			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®																			
Intel AMT	None																			
Modem	None																			
Security chip	None																			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo																			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo																			
Floor Stand	System floor stand for vertical orientation																			
Power supply	180 watts, universal, manual switch																			
Machine	<ul style="list-style-type: none">• Glossy black bezel; metal case• 13.2" W X 15.0" D X 3.9" H• 336mm W X 382mm D X 101mm H• 13.2 lb (6.0 kg) in maximum configuration• Highlighted optical drive button for easy access																			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed																			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1																			
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-Edge72 sheet; For Lenovo service upgrade options, please go to S-TC sheet									

See footnotes for important warranty information

US model(s) announced Oct 23, 2012, Nov 20, 2012, Dec 25, 2012, or Feb 19, 2013

✗ US models withdrawn effective November 2012 or January 2013

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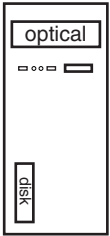
(TAPI1-5) February 2013

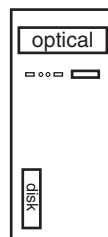
ThinkCentre Edge 72 Tower (3484) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	PCIe Mini Card WLAN	Blue-tooth	Media reader	Parallel port	Serial port	Global	Win7 preload	Ann date (mm/dd/yy)
3484-A7U	3x2	i3-2130	4GBx1 1600MHz	500G 7200	None	DVD±RW	HD 7350	None	None	None	Parallel	Serial	None	Pro 64	06/19/12
3484-A8U	3x2	i3-2120	4GBx1 1600MHz	500G 7200	None	DVD±RW	HD 7350	None	None	None	Parallel	Serial	None	Pro 64	06/19/12
3484-A9U	3x2	G630	2GBx1 1600MHz	250G 7200	None	DVD±RW	HD 7350	None	None	None	Parallel	Serial	None	Pro 64	06/19/12
3484-FDU	3x2	G640	4GBx1 1600MHz	500G 7200	None	DVD±RW	Intel HD	None	None	None	None	Serial	None	Pro 64	07/10/12
3484-GAU	3x2	G640	2GBx1 1600MHz	500G 7200	None	DVD±RW	Intel HD	None	None	None	None	Serial	None	Pro 64	07/17/12
3484-BFU	3x2	G640	2GBx1 1600MHz	250G 7200	None	DVD±RW	Intel HD	None	None	None	Parallel	Serial	None	Pro 64	08/14/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G640 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache) , integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Power Manager ● ThinkVantage Communication Utility ● View Management Utility ● Lenovo Solution Center ● Lenovo Message Center Plus ● Lenovo Simple Tap ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Windows Live™ Essentials ● Microsoft® Office preloaded; purchase a product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets			
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (VGA)@60Hz; 1920x1200 (DVI-D)@60Hz <i>Some:</i> AMD Radeon™ HD 7350 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort™, 30 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz; works along with Intel HD Graphics to support up to four independent monitors			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
PCIe WLAN	None			
Bluetooth	None			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo		Security ● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Individual USB port disablement	
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		RoHS-compliant	
Power supply	180 watts, universal, manual switch		Supports ThinkVantage Technologies	
Machine	● Glossy black bezel; metal case ● 6.3" W X 15.7" D X 15.6" H (with handle) ● 160mm W X 399mm D X 397mm H ● 16.5 lb (7.5 kg) in maximum configuration ● Ergonomic rubberized handle ● Highlighted optical drive button for easy access		For compatible accessories, please go to O-Edge72 sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty¹	1-year, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			



See footnotes for important warranty information

US model(s) announced June 19, July 10, July 17, or August 14, 2012

✗ US models withdrawn effective August 2012

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(TAPI1-3) August 2012

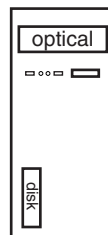
ThinkCentre Edge 72 Tower (3484) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	PCIe Mini Card WLAN	Blue-tooth	Media reader	Parallel port	Serial port	Global	Win7 preload	Ann date (mm/dd/yy)
✗ 3484-A6U	3x2	i5-3550S	4GBx1 1600MHz	1TB 7200	None	DVD±RW	HD 7350	None	None	None	Parallel	Serial	None	Pro 64	06/19/12
✗ 3484-C1U	3x2	i5-3470S	4GBx1 1600MHz	500G 7200	None	DVD±RW	HD 2500	None	None	None	None	None	None	Pro 64	06/19/12
3484-FCU	3x2	i5-3470S	4GBx1 1600MHz	500G 7200	None	DVD±RW	HD 2500	None	None	None	None	Serial	None	Pro 64	07/10/12
3484-BGU	3x2	i3-3220	4GBx1 1600MHz	500G 7200	None	DVD±RW	HD 2500	None	None	None	Parallel	Serial	None	Pro 64	09/04/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Stylish design, reliability, and productivity for small/medium businesses		<div>Preloaded operating system</div> <div>Genuine Windows® 7 Professional 64</div> <div>Ready to install applications (only some listed)</div> <div><ul style="list-style-type: none">• Rescue and Recovery™• Password Manager</div> <div>Preloaded applications (only some listed)</div> <div><ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Communication Utility• View Management Utility• Lenovo Solution Center• Lenovo Message Center Plus• Lenovo SimpleTap• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft® Office preloaded; purchase a product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)</div> <div>Security</div> <div><ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement</div> <div>RoHS-compliant</div> <div>Supports ThinkVantage Technologies</div> <div>For compatible accessories, please go to O-Edge72 sheet; For Lenovo service upgrade options, please go to S-TC sheet</div>
Processor	Intel® Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller Intel Core i5-3470S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-3550S Processor (4 cores / 4 threads, 3.0GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD 2500 Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets		
Graphics	<i>Some:</i> Intel HD Graphics 2500 in processor, uses main memory, DirectX® 11, one VGA, one DVI-D, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (VGA)@60Hz; 1920x1200 (DVI-D)@60Hz <i>Some:</i> AMD Radeon™ HD 7350 , DirectX 11, 3D Hardware Acceleration, 512MB, PCI Express® 2.0 x16 adapter, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort™, 30 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz; works along with Intel HD Graphics to support up to four independent monitors		
DP dongle	None		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel H61 Express Chipset		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)		
PCIe WLAN	None		
Bluetooth	None		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	180 watts, universal, manual switch		
Machine	<ul style="list-style-type: none">• Glossy black bezel; metal case• 6.3" W X 15.7" D X 15.6" H (with handle)• 160mm W X 399mm D X 397mm H• 16.5 lb (7.5 kg) in maximum configuration• Ergonomic rubberized handle• Highlighted optical drive button for easy access		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed		
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1		
Limited Warranty¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		



See footnotes for important warranty information
 US model(s) announced June 19, July 10, or September 4, 2012
 ✗ US models withdrawn effective August 2012

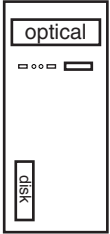
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 (TAPI1-4) September 2012

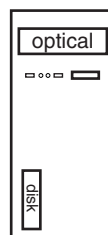
ThinkCentre Edge 72 Tower (3484) - TopSeller (Win 8)

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	PCIe Mini Card WLAN	Blue-tooth	Media reader	Parallel port	Serial port	Global	Preload	Ann date (mm/dd/yy)
3484-DEU	3x2	G640	4GBx1 1600MHz	500G 7200	None	DVD	Intel HD	None	None	None	Parallel	Serial	None	Win7 Pro64	10/23/12
3484-DFU	3x2	i3-3220	4GBx1 1600MHz	500G 7200	None	DVD	HD 2500	None	None	None	Parallel	Serial	None	Win7 Pro64	10/23/12
3484-HNU	3x2	G645	2GBx1 1600MHz	500G 7200	None	DVD±RW	Intel HD	None	None	None	Parallel	Serial	None	Win7 Pro64	11/20/12
3484-HPU	3x2	i3-3220	4GBx1 1600MHz	500G 7200	None	DVD±RW	HD 2500	None	None	None	Parallel	Serial	None	Win7 Pro64	11/20/12
3484-JJU	3x2	G2120	4GBx1 1600MHz	500G 7200	None	DVD±RW	Intel HD	None	None	None	Parallel	Serial	None	Win7 Pro64	12/25/12
3484-JMU	3x2	G2020	2GBx1 1600MHz	500G 7200	None	DVD±RW	Intel HD	None	None	None	Parallel	Serial	None	Win7 Pro64	02/19/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Pentium® G640 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G645 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G2020 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Pentium G2120 Processor (2 cores / 2 threads, 3.1GHz, 3MB cache) , integrated Intel HD Graphics, integrated 1600MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core™ i3-3220 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , integrated Intel HD Graphics 2500, integrated 1600MHz dual-channel DDR3 memory controller		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Power Manager● ThinkVantage Communication Utility● View Management Utility● Lenovo® Solution Center● Lenovo Message Center Plus● Lenovo SimpleTap● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office preloaded; purchase a product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3 , two 240-pin DIMM sockets <i>System automatically clocks down for processors with 1066MHz DDR3 memory controller</i>			
Graphics	Intel HD Graphics or Intel HD Graphics 2500 in processor, uses main memory, one VGA, one DVI-D, supports dual independent display; <i>Maximum resolution: 2560x1600 (VGA)@60Hz; 1920x1200 (DVI-D)@60Hz</i>			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
Onboard SATA	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
PCIe WLAN	None			
Bluetooth	None			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	180 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 6.3" W X 15.7" D X 15.6" H (with handle)● 160mm W X 399mm D X 397mm H● 16.5 lb (7.5 kg) in maximum configuration● Ergonomic rubberized handle● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-Edge72 sheet; For Lenovo service upgrade options, please go to S-TC sheet	



See footnotes for important warranty information

US model(s) announced Oct 23, 2012, Nov 20, 2012, Dec 25, 2012, or Feb 19, 2013

✗ US models withdrawn effective January 2013

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(TAPI1-6) February 2013

Memory

2GB PC3-12800 DDR3 UDIMM	0A65728	ann	06/05/12
4GB PC3-12800 DDR3 UDIMM	0A65729	ann	06/05/12
8GB PC3-12800 DDR3 UDIMM	0A65730	ann	06/05/12

More information at

www.lenovo.com/support/desktopmemorycompatibility

Optical

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann	09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann	08/23/11
Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann	03/31/09

Storage and removable storage

500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann	11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann	08/19/08
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Graphics

Small 3493 support Low Profile:

NVIDIA NVS 510 2GB Graphics Card by Lenovo ⁶⁷	0B47077	ann	01/29/13
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Tower 3484 support:

NVIDIA NVS 510 2GB Graphics Card by Lenovo ⁶⁷	0B47077	ann	01/29/13
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⁶⁷ Simultaneously use the graphic card monitor ports along with the system's integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.

More information at www.lenovo.com/support/graphiccards

Keyboard

Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	ann	12/08/09
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09
Lenovo Cherry Smartcard Keyboard	0A36328	ann	05/10/11

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at www.lenovo.com/support/keyboards

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
Lenovo Wireless Laser Mouse ⁶⁰	0A36188	ann	12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09

More information at www.lenovo.com/support/mice

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Multimedia

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann	01/07/10
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⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann	09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2323p Wide 23" (VGA, DP, DVI-D) ⁶⁹	3024HC1	ann	05/01/12

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at www.lenovo.com/support/monitors

Monitor Accessories⁴⁶

Lenovo USB Soundbar	0A36190	ann	05/01/12
Lenovo DVI to DVI Monitor Cable	0B47071		
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann	09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann	08/24/10
ThinkCentre Extend Arm	57Y4352	ann	07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



ThinkCentre E73 SFF and Tower



ThinkCentre E73 Tower
with Dual Lenovo ThinkVision Monitors



ThinkCentre E73 SFF



ThinkCentre E73 SFF



ThinkCentre E73 Tower



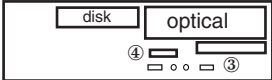
ThinkCentre E73 SFF
with HDD and optional SSD

ThinkCentre E73 SFF (10AU) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Parallel port	Serial port	Floor stand	Keyboard / mouse	Global	Preload	Ann date (mm/dd/yy)
10AU002MUS	3x4	i5-4430S	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	None	Serial	None	USB	None	Win7 Pro64 (DG)	10/22/13
10AU002PUS	3x4	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	Parallel	Serial	Stand	USB(slim)	None	Win7 Pro64 (DG)	10/22/13
10AU002QUS	3x4	G3220	2GBx1	500G 7200	DVD±RW	None	None	Intel HD	Parallel	Serial	Stand	USB(slim)	None	Win7 Pro64 (DG)	10/22/13
10AU002RUS	3x4	i5-4570S	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	Parallel	Serial	Stand	USB(slim)	None	Win7 Pro64 (DG)	10/22/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Stylish design, reliability, and productivity for small/medium businesses											Preloaded operating system		
Processor	Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket											Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) • Rescue and Recovery™ • Password Manager		
Implementation	Processor in LGA1150 socket											Preloaded applications (only some listed)		
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3* , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller											• ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Communication Utility • ThinkVantage Power Manager • ThinkVantage Device Experience • View Management Utility • Lenovo Cloud Storage by SugarSync • Lenovo Solution Center • Lenovo Message Center Plus • Norton™ Internet Security (30 days of virus definitions) • Adobe® Reader® • Skype™ • Evernote® • Microsoft® Office preloaded; purchase a product key to activate • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) • Nitro Pro		
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display; Maximum resolution: 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)													
DP dongle	None													
Disk	Some: SATA 6.0Gb/s, 3.5" Wide, 7200 rpm													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset													
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar													
eSATA port	None													
Media reader	Optional 9-in-1 media reader, internal USB 2.0													
Chipset	Intel H81 Express Chipset													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Two USB 3.0, two USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DisplayPort													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
PCIe WLAN	None													
Bluetooth	None													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio													
IEEE 1394	None													
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN													
Manageability	Intel Standard Manageability													
Modem	None													
Security chip	None													
Keyboard	Some: Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo Some: Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo													
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo													
Floor Stand	Optional system floor stand for vertical orientation													
Power supply	180 watts, universal, autosensing													
Machine	• Glossy black bezel; metal case • 13.2" W X 15.0" D X 3.98" H • 336mm W X 382mm D X 101mm H • 13.2 lb (6.0 kg) in maximum configuration • Highlighted optical drive button for easy access													
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 2.5", N/A, no access, opt 2nd SSD* Bay 4: 1.5", .35" high, access, optnl reader* *bay only available on models with SSD/reader installed													
Slot	Slot 1: Low Profile, PCI Express® 3.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1													
														
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											Security • One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information
US model(s) announced October 22, 2013

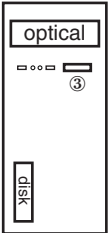
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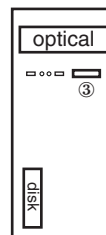
ThinkCentre E73 Tower (10AS) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	PCIe WLAN	Media reader	Graphics	Parallel port	Serial port	Keyboard / mouse	Global	Preload	Ann date (mm/dd/yy)
10AS002JUS	3x3	i3-4130	4GBx1	500G 7200	DVD±RW	None	None	HD 4400	Parallel	Serial	USB(slim)	None	Win7 Pro64 (DG)	10/22/13
10AS002KUS	3x3	i5-4570S	4GBx1	500G 7200	DVD±RW	None	None	HD 4600	Parallel	Serial	USB(slim)	None	Win7 Pro64 (DG)	10/22/13
10AS005LUS	3x3	G3220	2GBx1	500G 7200	DVD±RW	None	None	Intel HD	None	None	USB	None	Win7 Pro64 (DG)	12/10/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning Processor	<i>Stylish design, reliability, and productivity for small/medium businesses</i> Intel® Pentium® G3220 Processor (2 cores / 2 threads, 3.0GHz, 3MB cache), Intel HD Graphics, 1333MHz DDR3 memory controller Intel Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Power Manager● ThinkVantage Device Experience● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Evernote®● Microsoft® Office preloaded; purchase a product key to activate● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Nitro Pro	
Implementation				
Memory	16GB max, UDIMM, PC3-12800 1600MHz DDR3* , two 240-pin DIMM sockets *System automatically clocks down for processors with 1333MHz memory controller			
Graphics	Intel HD Graphics or Intel HD Graphics 4400/4600 in processor, uses main memory, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort)@60Hz; 1920x1200 (VGA)@60Hz (Reduced Blanking)			
DP dongle	None			
Disk	<i>Some:</i> SATA 6.0Gb/s, 3.5" Wide, 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
Onboard SATA	SATA cables match SATA devices (each 1-drop to device), one SATA 3.0Gb/s connector (for optical) and two SATA 6.0Gb/s connectors (for HDD/SSD) on planar			
eSATA port	None			
Media reader	Optional 9-in-1 media reader, internal USB 2.0			
Chipset	Intel H81 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Two USB 3.0, two USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
PCIe WLAN	None			
Bluetooth	None			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111GN, Wake on LAN			
Manageability	Intel Standard Manageability			
Modem	None			
Security chip	None			
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), black, Lenovo® logo <i>Some:</i> Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo			
Power supply	180 watts, universal, autosensing			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 6.3" W X 15.7" D X 15.6" H (with handle)● 160mm W X 400mm D X 397mm H● 16.5 lb (7.5 kg) in maximum configuration● Ergonomic rubberized handle● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, optnl reader* *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 3.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet	



See footnotes for important warranty information

US model(s) announced October 22, 2013 or December 10, 2013

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(TLS1T-1) December 2013



ThinkCentre E93z with Frame Stand



ThinkCentre E93z with Monitor Stand



ThinkCentre E93z with Frame Stand



ThinkCentre E93z with Monitor Stand



ThinkCentre E93z with Frame Stand



ThinkCentre E93z with Monitor Stand



ThinkCentre E93z with UltraFlex Stand



ThinkCentre E93z with UltraFlex Stand



ThinkCentre E93z with UltraFlex Stand



ThinkCentre E93z with UltraFlex Stand
with optional wireless mouse / keyboard
and Lenovo ThinkVision Monitor



ThinkCentre E93z with UltraFlex Stand



ThinkCentre E93z (handle)

ThinkCentre E93z (10B8) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Pro- cessor	Memory ^a	Wide- screen display	Multi- Touch	Camera (mega- pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Stand type	Key- board/ Mouse	Preload	Ann date (mm/dd/yy)
10B80007US	i5-4430S	4GBx1	21.5" FHD	None	2.0M	500G 7200	DVD±RW	HD 4600	N2230	Media	Frame	USB	Win7 P64 DG Win8	08/27/13
10B80058US	i3-4130	4GBx1	21.5" FHD	None	2.0M	500G 7200	DVD±RW	HD 4400	N2230	Media	Frame	USB(slim)	Win7 P64 DG Win8	10/22/13
10B8007CUS	i5-4430S	4GBx1	21.5" FHD	None	2.0M	500G 7200	DVD±RW	HD 4600	N7260	Media	UltraFlex	USB	Win7 P64 DG Win8.1	04/08/14

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Premium All-In-One PC for the enterprise		Preloaded operating system <i>Some:</i> Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit
Processor	Intel® Core™ i3-4130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Intel HD Graphics 4400, 1600MHz DDR3 memory controller Intel Core i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Implementation	Processor in LGA1150 socket		Ready to install applications (only some listed) ● Rescue and Recovery™ ● Password Manager Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Communication Utility ● ThinkVantage Device Experience ● ThinkVantage AutoLock ● Desktop Power Manager ● View Management Utility ● Lenovo Cloud Storage by SugarSync ● Lenovo Solution Center ● Lenovo Message Center Plus ● Norton™ Internet Security (30 days of virus definitions) ● Adobe® Reader® ● Skype™ ● Microsoft Office preloaded; purchase a product key to activate ● Cyberlink PowerDVD (DVD±RW, DVD) ● Cyberlink Power2Go (DVD±RW) ● Cyberlink PowerProducer (DVD±RW) ● Evernote ● Lenovo Solutions for Small Business ● Nitro Pro
Memory	16GB max, PC3-12800 1600MHz DDR3, two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics 4400/4600 in processor, uses main memory, DirectX® 11.1, external digital monitor support via HDMI, supports dual independent display; Max resolution: 1920x1080 (panel) @60Hz; 1920x1080 (HDMI) @60Hz		Security ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Individual USB port disablement ENERGY STAR® 5.2-compliant EuP 2013 GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Display	21.5" (546.1mm) Full HD 1080p (1920x1080) TFT color, wide viewing angle (+/- 85°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, infinity display, work as standalone monitor via HDMI-in connector		
Light sensor	None		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Controls	Monitor mode / computer mode button, volume up/down buttons, and power button		
Disk	SATA 3.0Gb/s, 2.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Onboard SATA	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector and one SATA 3.0Gb/s connector on planar		
Media reader	Optional 11-in-1 media card reader		
Chipset	Intel B85 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI-out, HDMI-in		
Side ports	Two USB 3.0 (one Always On USB 3.0), one headphone / microphone combo jack (stereo, 3.5mm), one optional media card reader		
PCIe Mini Card	Two PCI Express® Mini Card slots		
PCIe WLAN	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Wireless-N 7260, Wi-Fi + Bluetooth combo adapter, 2x2 Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-V, Wake on LAN®		
Audio support	High Definition (HD) Audio, Realtek ALC283CG / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Intel AMT	None		
Security chip	None		
Keyboard	Some: Lenovo® Slim New F5 USB Keyboard (USB connector), black Some: Preferred Pro USB Keyboard (USB connector), Lenovo logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU		
Color	Business black color		
VESA mount	Support VESA mount (100mm)		
Dimensions and weight (without stand)	Non-touch models (WxDxH): 21.02" X 1.91" X 15.20"; 534mm X 48.5mm X 386 mm 14.55 lb (6.6 kg) in maximum configuration Touch models (WxDxH): 21.02" X 1.95" X 15.20"; 534mm X 49.6mm X 386 mm 16.31 lb (7.4 kg) in maximum configuration		
Stand	Optional Frame Stand: Adjustable between 10° and 65° (Tilt) Optional Monitor Stand: Adjustable between -5° and 45° (Tilt) Optional UltraFlex Stand: Tilt: 65° back, 0° forward; Lift: 110mm; Swivel: +/-90°; supports recline mode (from an upright position to an angled plane) and cable management		
Limited Warranty	1-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information

US model(s) announced August 27 or October 22, 2013 or April 8, 2014

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ThinkCentre E93z (10B9) - NVIDIA (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Pro-cessor	Memory ⁸	Wide-screen display	Multi-Touch	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card Media reader	Stand type	Key-board/Mouse Global	Preload	Ann date (mm/dd/yy)
10B9000SUS	i5-4430S	4GBx1	21.5" FHD	None	2.0M	500G 7200	DVD±RW	GT 720A	N2230	Media	Frame	USB None Win7 Pro64	DG 08/27/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Premium All-In-One PC for the enterprise		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Lenovo Solutions for Small Business● Nitro Pro
Processor	Intel® Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller		
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4400/4600 in processor, and NVIDIA GeForce® GT 720A , PCI Express® x16, 1GB memory, DirectX® 11, external digital monitor support via HDMI, supports dual independent display; <i>Max resolution:</i> 1920x1080 (panel)@60Hz; 1920x1080 (HDMI)@60Hz		
Display	21.5" (546.1mm) Full HD 1080p (1920x1080) TFT color , wide viewing angle (+/- 85°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, infinity display, work as standalone monitor via HDMI-in connector		
Light sensor	None		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Controls	Monitor mode / computer mode button, volume up/down buttons, and power button		
Disk	SATA 3.0Gb/s, 2.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Onboard SATA	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector and one SATA 3.0Gb/s connector on planar		
Media reader	Optional 11-in-1 media card reader		
Chipset	Intel B85 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI-out, HDMI-in		
Side ports	Two USB 3.0 (one Always On USB 3.0), one headphone / microphone combo jack (stereo, 3.5mm), one optional media card reader		
PCIe Mini Card	Two PCI Express® Mini Card slots		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-V, Wake on LAN®		
Audio support	High Definition (HD) Audio, Realtek ALC283CG / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Intel AMT	None		Security <ul style="list-style-type: none">● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement ENERGY STAR® 5.2-compliant EuP 2013 GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to TC-AQP sheet; For Lenovo service upgrade options, please go to S-TC sheet
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	180 watts, autosensing, 92% PSU		
Color	Business black color		
VESA mount	Support VESA mount (100mm)		
Dimensions and weight (without stand)	<i>Non-touch models (WxDxH):</i> 21.02" X 1.91" X 15.20"; 534mm X 48.5mm X 386 mm 14.55 lb (6.6 kg) in maximum configuration <i>Touch models (WxDxH):</i> 21.02" X 1.95" X 15.20"; 534mm X 49.6mm X 386 mm 16.31 lb (7.4 kg) in maximum configuration		
Stand	<i>Optional Frame Stand:</i> Adjustable between 10° and 65° (Tilt) <i>Optional Monitor Stand:</i> Adjustable between -5° and 45° (Tilt) <i>Optional UltraFlex Stand:</i> Tilt: 65° back, 0° forward; Lift: 110mm; Swivel: +/-90°; supports recline mode (from an upright position to an angled plane) and cable management		
Limited Warranty	1-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced August 27, 2013

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ThinkCentre E93z (10BA) - Multi-touch (NVIDIA) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Pro-processor	Memory ^a	Wide-screen display	Multi-Touch	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card Media reader	Stand type	Key-board/Mouse Global	Preload	Ann date (mm/dd/yy)
10BA000EUS	i7-4770S	4GBx1	21.5" FHD Touch	2.0M	500G Hybrid	DVD±RW	GT 720A	N2230	Media	Frame	2.4G	None	Win7 Pro64 DG 08/27/13
10BA000FUS	i7-4770S	4GBx1	21.5" FHD Touch	2.0M	500G Hybrid	DVD±RW	GT 720A	N2230	Media	UltraFlex	2.4G	None	Win7 Pro64 DG 08/27/13
10BA000GUS	i5-4430S	4GBx1	21.5" FHD Touch	2.0M	500G 7200	DVD±RW	GT 720A	N2230	Media	Frame	USB	None	Win7 Pro64 DG 08/27/13
10BA000HUS	i5-4430S	8GBx1	21.5" FHD Touch	2.0M	500G 7200	DVD±RW	GT 720A	N2230	Media	Frame	USB	None	Win7 Pro64 DG 08/27/13
10BA001LUS	i7-4770S	8GBx1	21.5" FHD Touch	2.0M	500G Hybrid	DVD±RW	GT 720A	N2230	Media	UltraFlex	USB	None	Win7 Pro64 DG 08/27/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning Processor	Premium All-In-One PC for the enterprise Intel® Core™ i5-4430S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.2GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Intel Core i7-4770S Processor (4 cores / 8 threads, 3.1GHz, 8MB cache), Turbo Boost 2.0 (3.9GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		Preloaded operating system Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Ready to install applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Communication Utility● ThinkVantage Device Experience● ThinkVantage AutoLock● Desktop Power Manager● View Management Utility● Lenovo Cloud Storage by SugarSync● Lenovo Solution Center● Lenovo Message Center Plus● Norton™ Internet Security (30 days of virus definitions)● Adobe® Reader®● Skype™● Microsoft Office preloaded; purchase a product key to activate● Cyberlink PowerDVD (DVD±RW, DVD)● Cyberlink Power2Go (DVD±RW)● Cyberlink PowerProducer (DVD±RW)● Evernote● Lenovo Solutions for Small Business● Nitro Pro
Implementation	Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4400/4600 in processor, and NVIDIA GeForce® GT 720A , PCI Express® x16, 1GB memory, DirectX® 11, external digital monitor support via HDMI, supports dual independent display; <i>Max resolution:</i> 1920x1080 (panel) @60Hz; 1920x1080 (HDMI) @60Hz		
Display	21.5" (546.1mm) Full HD 1080p (1920x1080) TFT color , wide viewing angle (+/- 85°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, infinity display, work as standalone monitor via HDMI-in connector		
Light sensor	None		
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Controls	Monitor mode / computer mode button, volume up/down buttons, and power button		
Disk	<i>Some:</i> SATA 3.0Gb/s, 2.5" Wide, 7200 rpm <i>Some:</i> 500GB (5400 rpm) hybrid hard disk / with 8GB MLC NAND flash memory, SATA 6.0Gb/s, 2.5" wide		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Onboard SATA	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector and one SATA 3.0Gb/s connector on planar		
Media reader	Optional 11-in-1 media card reader		
Chipset	Intel B85 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI-out, HDMI-in		
Side ports	Two USB 3.0 (one Always On USB 3.0), one headphone / microphone combo jack (stereo, 3.5mm), one optional media card reader		
PCIe Mini Card	Two PCI Express® Mini Card slots		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-V, Wake on LAN®		
Audio support	High Definition (HD) Audio, Realtek ALC283CG / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Intel AMT	None		
Security chip	None		
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), Lenovo® logo <i>Some:</i> Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black		
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, black, Lenovo logo <i>Some:</i> Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black		
Power supply	180 watts, autosensing, 92% PSU		
Color	Business black color		
VESA mount	Support VESA mount (100mm)		
Dimensions and weight (without stand)	<i>Non-touch models (WxDxH):</i> 21.02" X 1.91" X 15.20"; 534mm X 48.5mm X 386 mm 14.55 lb (6.6 kg) in maximum configuration <i>Touch models (WxDxH):</i> 21.02" X 1.95" X 15.20"; 534mm X 49.6mm X 386 mm 16.31 lb (7.4 kg) in maximum configuration		
Stand	<i>Optional Frame Stand:</i> Adjustable between 10° and 65° (Tilt) <i>Optional Monitor Stand:</i> Adjustable between -5° and 45° (Tilt) <i>Optional UltraFlex Stand:</i> Tilt: 65° back, 0° forward; Lift: 110mm; Swivel: +/-90°; supports recline mode (from an upright position to an angled plane) and cable management		
Limited Warranty	1-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model(s) announced August 27, 2013

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ThinkCentre E93z (10BA) - Multi-touch (NVIDIA) - TopSeller (Win8)

Product Specifications Reference (PSREF)

Type-model	Pro-cessor	Memory ^a	Wide-screen display	Multi-Touch	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card Media reader	Stand type	Key-board/Mouse Global	Preload	Ann date (mm/dd/yy)	
10BA000MUS	i5-4670S	4GBx1	21.5" FHD	Touch	2.0M	500G 7200	DVD±RW	GT 720A	N2230	Media Frame	USB	None	Win8 Pro64	08/27/13
10BA001MUS	i5-4570S	4GBx1	21.5" FHD	Touch	2.0M	500G 7200	DVD±RW	GT 720A	N2230	Media UltraFlex	USB	None	Win8 Pro64	08/27/13

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- 1-year limited warranty

Positioning	Premium All-In-One PC for the enterprise		Preloaded operating system Windows® 8 Pro 64-bit Web install applications (only some listed) <ul style="list-style-type: none">• Password Manager Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage System Update• ThinkVantage AutoLock• Desktop Power Manager• View Management Utility• Lenovo Cloud Storage by SugarSync• Lenovo Solution Center• Lenovo Support• Lenovo Companion• Norton Internet Security (30 days of virus definitions)• Skype™• Microsoft Office preloaded; purchase a product key to activate• Cyberlink PowerDVD (DVD±RW, DVD)• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerProducer (DVD±RW)• Evernote®• Lenovo Solutions for Small Business• Nitro Pro• AccuWeather• Norton™ Studio
Processor	Intel® Core™ i5-4570S Processor (4 cores / 4 threads, 2.9GHz, 6MB cache), Turbo Boost 2.0 (3.6GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller		
Implementation	Intel Core i5-4670S Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.8GHz), Intel HD Graphics 4600, 1600MHz DDR3 memory controller Processor in LGA1150 socket		
Memory	16GB max, PC3-12800 1600MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 4400/4600 in processor, and NVIDIA GeForce® GT 720A , PCI Express® x16, 1GB memory, DirectX® 11, external digital monitor support via HDMI, supports dual independent display; <i>Max resolution:</i> 1920x1080 (panel)@60Hz; 1920x1080 (HDMI)@60Hz		
Display	21.5" (546.1mm) Full HD 1080p (1920x1080) TFT color , wide viewing angle (+/- 85°), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, infinity display, work as standalone monitor via HDMI-in connector		
Light sensor	None		
Multi-touch	Projected Capacitive Touch (PCT) technology, supports 10-point multi-touch		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, supports 1080p, with dual array digital microphone, LED indicator, physical switch on/off		
Controls	Monitor mode / computer mode button, volume up/down buttons, and power button		
Disk	SATA 3.0Gb/s, 2.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Onboard SATA	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector and one SATA 3.0Gb/s connector on planar		
Media reader	Optional 11-in-1 media card reader		
Chipset	Intel B85 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI-out, HDMI-in		
Side ports	Two USB 3.0 (one Always On USB 3.0), one headphone / microphone combo jack (stereo, 3.5mm), one optional media card reader		
PCIe Mini Card	Two PCI Express® Mini Card slots		
PCIe WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, Wi-Fi + Bluetooth combo adapter, 2x2		
Bluetooth	Bluetooth 4.0 wireless, integrated in Intel Wi-Fi + Bluetooth combo adapter		
Ethernet	One gigabit ethernet port, Intel I217-V, Wake on LAN®		
Audio support	High Definition (HD) Audio, Realtek ALC283CG / two internal stereo speakers (3watt x 2), Dolby® Advanced Audio™ v2 certified, Microsoft Lync™ certified		
Intel AMT	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, black, Lenovo logo		
Power supply	180 watts, autosensing, 92% PSU		
Color	Business black color		
VESA mount	Support VESA mount (100mm)		
Dimensions and weight (without stand)	<i>Non-touch models (WxDxH):</i> 21.02" X 1.91" X 15.20"; 534mm X 48.5mm X 386 mm 14.55 lb (6.6 kg) in maximum configuration <i>Touch models (WxDxH):</i> 21.02" X 1.95" X 15.20"; 534mm X 49.6mm X 386 mm 16.31 lb (7.4 kg) in maximum configuration		
Stand	<i>Optional Frame Stand:</i> Adjustable between 10° and 65° (Tilt) <i>Optional Monitor Stand:</i> Adjustable between -5° and 45° (Tilt) <i>Optional UltraFlex Stand:</i> Tilt: 65° back, 0° forward; Lift: 110mm; Swivel: +/-90°; supports recline mode (from an upright position to an angled plane) and cable management		
Limited Warranty	1-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
 US model(s) announced August 27, 2013

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Partial list of Lenovo Services⁷ for ThinkCentre desktops

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

<p><u>Lenovo service upgrade options for ThinkCentre M series</u></p> <p><i>ThinkCentre desktop with 1-year Onsite warranty</i> <i>Models with 7-digit MTM</i> 2-year Onsite 9x5 Next Business Day 41C9187 3-year Onsite 9x5 Next Business Day 41C9188 <i>Models with 10-digit MTM</i> 2-year Onsite 9x5 Next Business Day 5WS0D80992 3-year Onsite 9x5 Next Business Day 5WS0D80967</p> <p><i>ThinkCentre desktop with 3-year Onsite warranty</i> <i>Models with 7-digit MTM</i> 4-year Onsite 9x5 Next Business Day 41C9194 <i>Models with 10-digit MTM</i> 4-year Onsite 9x5 Next Business Day 5WS0D81063</p>	<p><u>Lenovo service upgrade options for ThinkCentre A series and Edge series</u></p> <p><i>ThinkCentre desktop with 1-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i> 2-year Onsite 9x5 Next Business Day 45K5949 3-year Onsite 9x5 Next Business Day 45K5950</p> <p><i>ThinkCentre desktop with 3-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i> 4-year Onsite 9x5 Next Business Day 45K5957 5-year Onsite 9x5 Next Business Day 45K5963</p>
<p><u>Lenovo Priority Support for enterprise customers</u></p> <ul style="list-style-type: none"> • 24x7 support with priority routing and advanced level technicians <p><i>ThinkCentre desktop with 1-year Onsite warranty</i> Add to 3-year warranty coverage - 3-year Priority Support* 45J9087</p> <p><i>ThinkCentre desktop with 3-year Onsite warranty</i> Add to 3-year warranty coverage - 3-year Priority Support* 45J9088 Add to 4-year warranty coverage - 4-year Priority Support* 45J9089 Add to 5-year warranty coverage - 5-year Priority Support* 45J9090</p> <p>* Covered machine must have concurrent warranty coverage.</p>	

Disclaimer

Lenovo provides the information in the Product Specifications Reference (PSREF) withdrawn product books on an "AS-IS" basis. Because the actual products have been withdrawn from marketing, the information in these withdrawn product books is no longer maintained or updated. The referenced footnote numbering may not correspond with the listed footnotes.

PSREF books for the withdrawn systems:

http://www.lenovo.com/psref/psrefs_withdrawn.html

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, go to http://support.lenovo.com/en_US/product-service/warranty-status/WarrantyPolicies.page. Lenovo makes no representation or warranty regarding third party products or services.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.

³ **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

⁴ **CD and DVD list** maximum rates; rates are variable and are often less than the maximum.

⁵ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.

⁷ **Lenovo Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See lenovo terms and conditions for complete details and restrictions.

⁸ **Memory:** For PCs without a separate graphics card, memory supports both system and video. Accessible system memory may be up to 384MB less than the amount stated, depending on video mode.

⁹ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

¹⁰ **Modem speeds:** Public network download speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps for V92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.

¹¹ **For combination drives,** maximum speeds only are given in the following order: CD read, CD write, CD re-write, DVD read.

¹² **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

¹³ **Wireless capability:** Requires compatible wireless-enabled options sold separately.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

¹⁵ **Update Connector** is available at no charge to registered customers during the limited warranty period. Line charges may apply.

¹⁶ **Embedded Security Subsystem** works with optional VPN software.

- ¹⁸ **Embedded Security Subsystem** may require download of client security software from the Web.
- ¹⁹ **Asset ID** allows system-specific information to be stored in a chip inside the system; it does not have any radio frequency support.
- ²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

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Product Specifications Reference

Version 452, April 2014

ThinkStation® WorkStations

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Summary of Changes

This section describes the changes made in this version of ThinkStation PSREF and in previous version.

This section includes changes for the three most recent versions, starting with Version 450.

This edition might also include minor corrections and editorial changes which are not identified.

April 15, 2014 - Version 452

Additions in this update

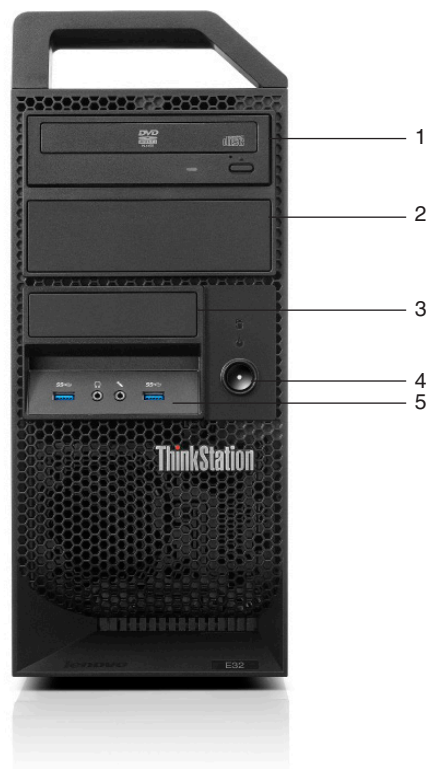
- ▶ New model(s)
 - ThinkStation S30 (4352) - TopSeller (April 2014)
 - ThinkStation S30 (4351) - April 2014
 - ThinkStation C30 (1137) - TopSeller (April 2014) - I
 - ThinkStation C30 (1137) - TopSeller (April 2014) - II
 - ThinkStation C30 (1136) - April 2014
 - ThinkStation D30 (4354) - TopSeller (April 2014)
 - ThinkStation D30 (4354) - TopSeller (April 2014) - II
 - ThinkStation D30 (4353) - April 2014
 - ThinkStation D30 (4353) - April 2014 - II

February 25, 2014 - Version 450

Additions in this update

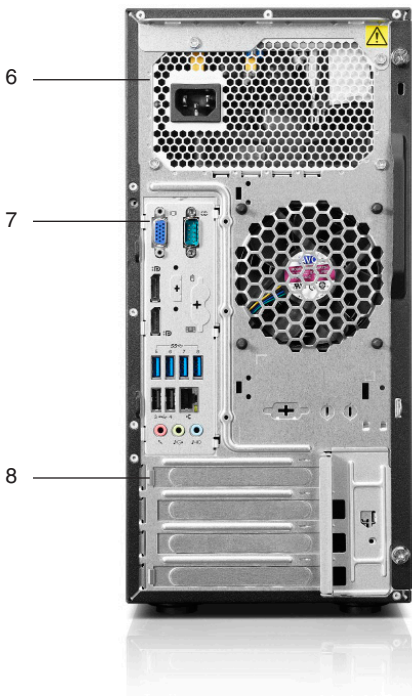
- ▶ New section
 - Summary of changes, contains changes list for the three most recent versions
- ▶ New sheet
 - ThinkStation options list for E32, S30, C30, D30
 - ThinkStation E32 Optional Configurations
 - ThinkStation S30 Optional Configurations
 - ThinkStation C30 Optional Configurations
 - ThinkStation D30 Optional Configurations

ThinkStation E32 Tower - Overview



Front view

- 1. External 5.25" Bay for optical
- 2. External 5.25" Bay for optical or optional 3.5" hard drive bay
- 3. Media card reader (optional) or optional mSATA SSD drive
- 4. Power Button
- 5. Front I/O: 2 USB 3.0 (blue)
 - 1 Headphone
 - 1 Microphone



Rear view

- 6. 280 watts Power Supply, 80 PLUS Bronze
- 7. Rear I/O: 2 USB 2.0
 - 4 USB 3.0 (blue)
 - 1 serial (9-pin)
 - 1 RJ-45 (GbE)
 - 1 line-in
 - 1 line-out
 - 1 microphone-in
 - 2 DisplayPort (for Intel HD Graphics)
 - 1 VGA (for Intel HD Graphics)
- 8. 1 PCIe 3.0 x16
 - 1 PCIe 2.0 x1
 - 1 PCIe 2.0 x16 (x4 elec)
 - 1 PCI

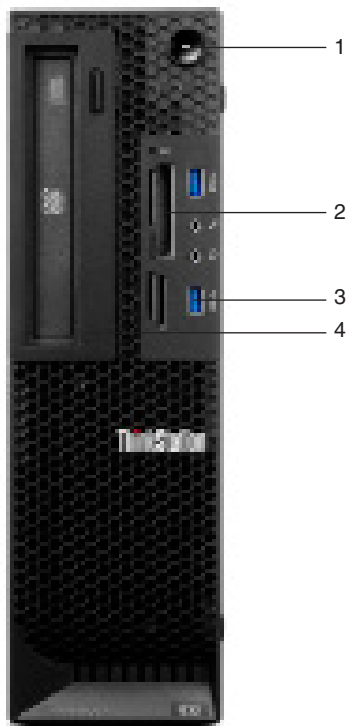
Internal

- One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3, Core i7-4000, and Core-i5 4000 families
- 4 DIMM sockets, supports up to 32GB ECC or non-ECC UDIMM memory
- Up to three 3.5" hard drive bays, two 3.5" hard drive bays are standard

Mechanical

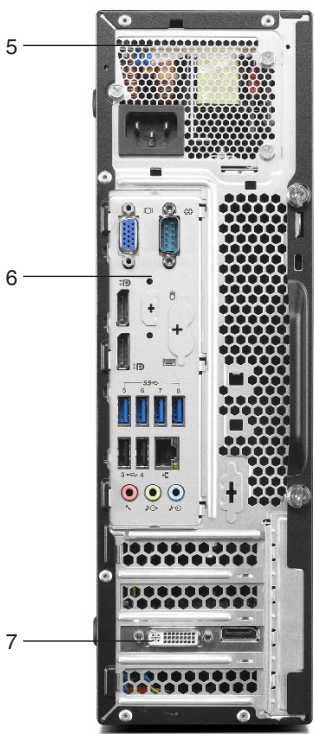
- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter

ThinkStation E32 SFF - Overview



Front view

- 1. Power Button
- 2. Media card reader (optional) or optional mSATA SSD drive
- 3. Front I/O: 2 USB 3.0 (blue)
 - 1 Headphone
 - 1 Microphone
- 4. 1 External 5.25" Bay for optical or optional slim optical + 3.5" hard drive bay or optional standalone 3.5" hard drive bay



Rear view

- 5. 240 watts Power Supply, 80 PLUS Bronze
- 6. Rear I/O: 2 USB 2.0
 - 4 USB 3.0(blue)
 - 1 serial (9-pin)
 - 1 RJ-45 (GbE)
 - 1 line-in
 - 1 line-out
 - 1 microphone-in
 - 2 DisplayPort (for Intel HD Graphics)
 - 1 VGA (for Intel HD Graphics)
- 7.* 1 PCIe 3.0 x16
 - 1 PCIe 2.0 x1
 - 1 PCIe 2.0 x16 (x4 elec)
 - 1 PCI

* Discrete graphics adapter is optional

Internal

- One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3, Core i7-4000, and Core-i5 4000 families
- 4 DIMM sockets, supports up to 32GB ECC or non-ECC UDIMM memory
- Up to two 3.5" hard drive bays and one 2.5" hard drive bay, one 3.5" hard drive bay is standard

Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter

ThinkStation E32 Tower (30A1) - TopSeller (August 2013)

Product Specifications Reference (PSREF)

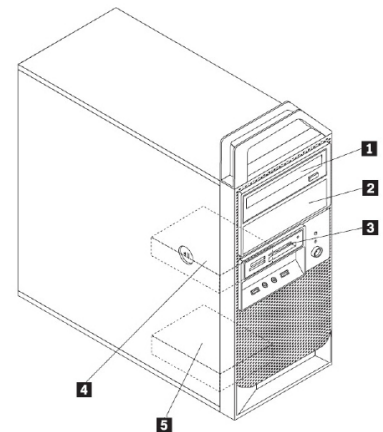
Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A10007US	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10008US	Xeon E3-1230 v3 (4C/3.3GHz/8MB/1600MHz)	1600MHz ECC	4GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10009US	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx2	Intel HD P4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002JUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002KUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002LUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002MUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
2: half-length, full-height, PCIe 2.0 x1
3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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(30A1-1) August 2013

ThinkStation E32 Tower (30A1) - TopSeller (August 2013) - II

Product Specifications Reference (PSREF)

Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A1002NUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002PUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002QUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002RUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002SUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002TUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002UUS	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)

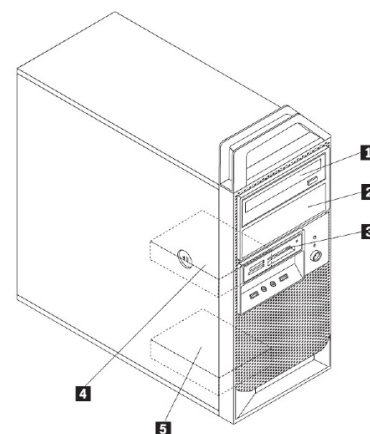
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
2: half-length, full-height, PCIe 2.0 x1
3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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(30A1-2) August 2013

ThinkStation E32 Tower (30A1) - TopSeller (August 2013) - III

Product Specifications Reference (PSREF)

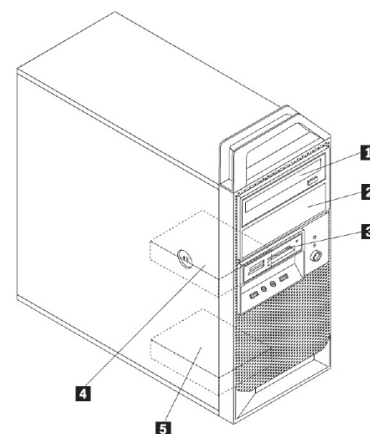
Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A1002VUS	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002XUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600		No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002YUS	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x256GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10030US	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10031US	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x128GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10032US	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10033US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
2: half-length, full-height, PCIe 2.0 x1
3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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(30A1-3) August 2013

ThinkStation E32 Tower (30A1) - TopSeller (August 2013) - IV

Product Specifications Reference (PSREF)

Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A10034US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10035US	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600		No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10036US	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	128GB SATA SSD+1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1003BUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003CUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003DUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003EUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64

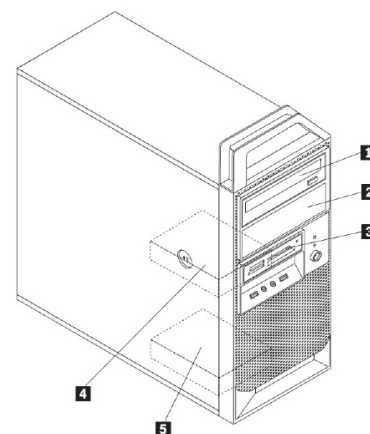
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
2: half-length, full-height, PCIe 2.0 x1
3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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ThinkStation E32 Tower (30A1) - TopSeller (August 2013) - V

Product Specifications Reference (PSREF)

Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A1003FUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003GUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003HUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003JUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003KUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600		No	1x500GB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003LUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003MUS	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64

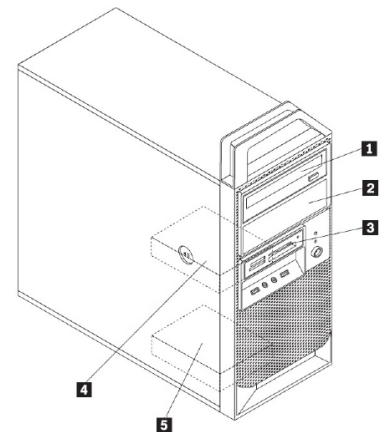
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
- 2: half-length, full-height, PCIe 2.0 x1
- 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
- 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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(30A1-5) August 2013

ThinkStation E32 Tower (30A1) - TopSeller (August 2013) - VI

Product Specifications Reference (PSREF)

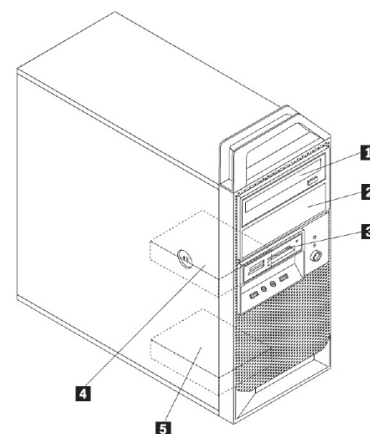
Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A1003NUS	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003QUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600		No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003RUS	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x256GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003SUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003TUS	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x128GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003UUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003VUS	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
- 2: half-length, full-height, PCIe 2.0 x1
- 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
- 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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ThinkStation E32 Tower (30A1) - TopSeller (August 2013) - VII

Product Specifications Reference (PSREF)

Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A1003WUS	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003XUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600		No	1x1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003YUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	128GB SATA SSD+1TB 3.5 SATA	DVD±RW	Media	No	Switch	Win8 Pro64

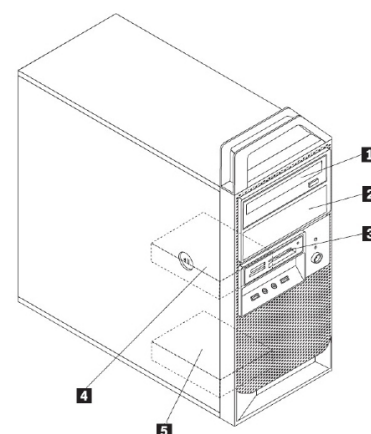
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
- 2: half-length, full-height, PCIe 2.0 x1
- 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
- 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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(30A1-7) August 2013

ThinkStation E32 Tower (30A1) - TopSeller (September 2013)

Product Specifications Reference (PSREF)

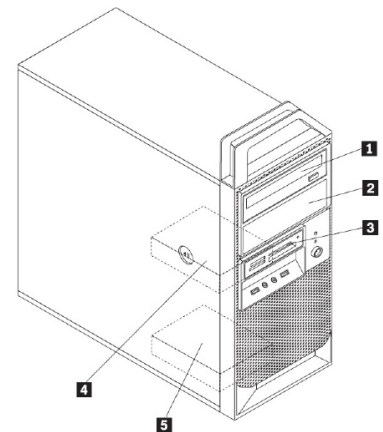
Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ²	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A1000RUS	Core i3-4130 (2C/3.4GHz/3MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4400		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64
30A1000SUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	No	Win7 Pro64 (Downgrade from Win8)
30A1002FUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002GUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002HUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A1002WUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x128GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A10037US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model ² DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
- 2: half-length, full-height, PCIe 2.0 x1
- 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
- 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration • 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

ThinkStation E32 Tower (30A1) - TopSeller (September 2013) - II

Product Specifications Reference (PSREF)

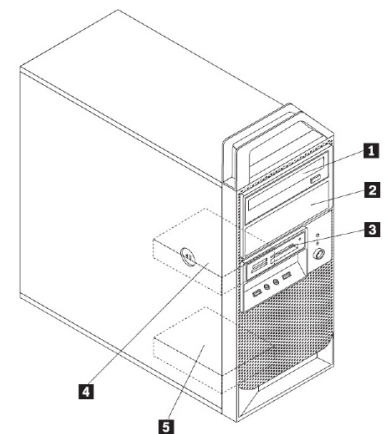
Type-model [*]	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ^{**}	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A10038US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A10039US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003AUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A1003PUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x128GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64

^{*} Model in *italics* shows that this is a Global Model ^{**} DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty [†]	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
2: half-length, full-height, PCIe 2.0 x1
3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

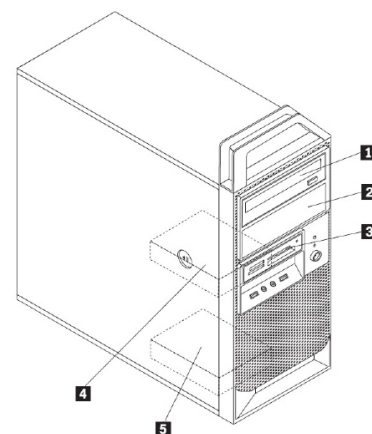
Type-model [*]	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ^{**}	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A0002TUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0002UUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0002VUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0002WUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0002XUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0002YUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0003OUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)

^{*} Model in *italics* shows that this is a Global Model^{**} DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty [†]	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
 (1) for optional media card reader, external
 (2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
 2: half-length, full-height, PCIe 2.0 x1
 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

ThinkStation E32 Tower (30A0) - August 2013 - II

Product Specifications Reference (PSREF)

Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A00031US	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A00032US	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A00033US	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A00034US	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A00035US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A00039US	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003AUS	Core i5-4570 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64

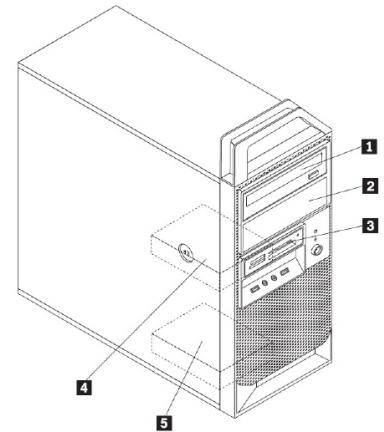
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
(1) for optional media card reader, external
(2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
2: half-length, full-height, PCIe 2.0 x1
3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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(30A0-2) August 2013

Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A0003BUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003CUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003DUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003EUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003FUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003GUS	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003HUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64

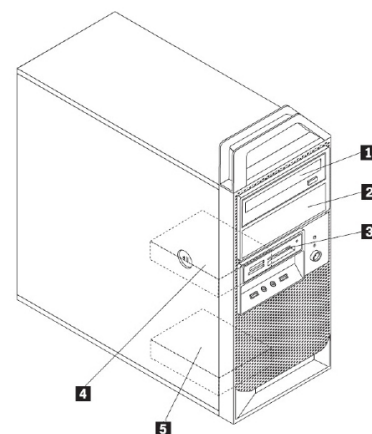
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
- Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
- Bay 3 Optional, 3.5", 1" high, supports one of the following:
 (1) for optional media card reader, external
 (2) for optional mSATA drive, internal
- Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
 2: half-length, full-height, PCIe 2.0 x1
 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Type-model [*]	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ^{**}	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A0003JUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003KUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64
30A0003LUS	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64

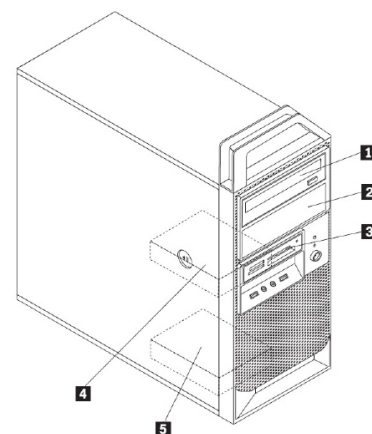
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty [†]	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
 Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
 Bay 3 Optional, 3.5", 1" high, supports one of the following:
 (1) for optional media card reader, external
 (2) for optional mSATA drive, internal
 Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
 Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
 2: half-length, full-height, PCIe 2.0 x1
 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

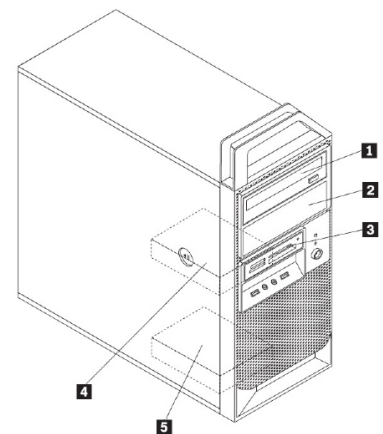
Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ^{**}	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A0002QUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0002RUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A0002SUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A00036US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A00037US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A00038US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model ^{**} DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
 Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
 Bay 3 Optional, 3.5", 1" high, supports one of the following:
 (1) for optional media card reader, external
 (2) for optional mSATA drive, internal
 Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
 Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
 2: half-length, full-height, PCIe 2.0 x1
 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

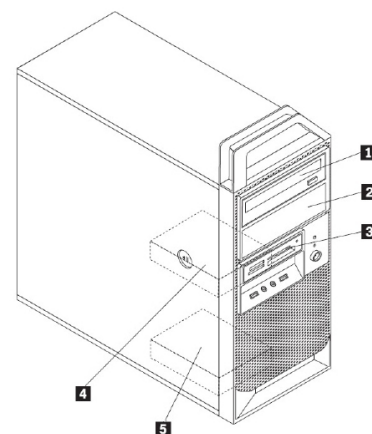
Type-model*	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	Chassis intrusion switch	Preloaded OS	Base warranty (-year)***	Ann date (mm/dd/yy)
30A0005RSS	Core i5-4570 4C/3.2 GHz/6 MB/1600MHz	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W	No	1x500GB 3.5" SATA	DVD±RW	Media	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/15/13
30A0005QSS	Xeon E3-1245 v3 4C/3.4 GHz/8 MB/1600MHz	1600MHz ECC	4GBx1	Intel HD P4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W	No	1x500GB 3.5" SATA	DVD±RW	Media	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13
30A0005QUS	Xeon E3-1245 v3 4C/3.4 GHz/8 MB/1600MHz	1600MHz ECC	4GBx1	Intel HD P4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W	No	1x500GB 3.5" SATA	DVD±RW	Media	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13
30A0005SUS	Core i7-4770 4C/3.2 GHz/8 MB/1600MHz	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W	No	1x500GB 3.5" SATA	DVD±RW	Media	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13
30A0005RUS	Core i5-4570 4C/3.2 GHz/6 MB/1600MHz	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W	No	1x500GB 3.5" SATA	DVD±RW	Media	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/15/13
30A0005SSS	Core i7-4770 4C/3.4 GHz/8 MB/1600MHz	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W	No	1x500GB 3.5" SATA	DVD±RW	Media	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13

*Model in *italics* shows that this is a Global Model **DL = Dual Link, SL = Single Link ***IWS= International Warranty Service®

• For detailed ThinkStation E32 Tower platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (75W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 75W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology
Storage	Up to three 3.5" SATA (SATA 6.0Gb/s, 7200rpm)/2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty†	3-year parts and labor

Drives Bays



- Bay 1 Standard, 5.25", 1.6" high, external, for optical
 Bay 2 Standard, 5.25", 1.6" high, external, for optical or: optional, 3.5", 1" high, 3rd hard drive bay
 Bay 3 Optional, 3.5", 1" high, supports one of the following:
 (1) for optional media card reader, external
 (2) for optional mSATA drive, internal
 Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay
 Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay

Notes:

Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only

Expansion Slots

- 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU)
 2: half-length, full-height, PCIe 2.0 x1
 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max)
 4: half-length, full-height, PCI 2.3

Mechanical

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 27.56 lb (12.5kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal (standard bays)
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

ThinkStation E32 SFF (30A3) - TopSeller (August 2013)

Product Specifications Reference (PSREF)

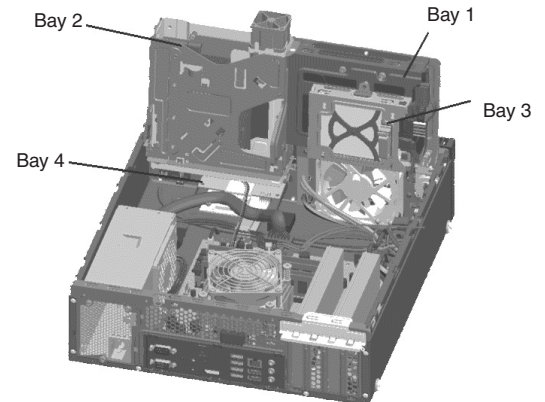
Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ^{**}	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A30004US	Xeon E3-1230 v3 (4C/3.3GHz/8MB/1600MHz)	1600MHz ECC	4GBx1		1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A30005US	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx2		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A30006US	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001FUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001LUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001RUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001SUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600		No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)

¹ Model in *italics* shows that this is a Global Model ^{**} DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (40W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 40W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays*



* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)

- Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay
Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following:
(1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional
(2) 3.5" 2nd hard drive bay (internal), optional
Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay
Bay 4 Optional, 3.5", 0.5" high, supports one of the following:
(1) for optional slim media card reader, external
(2) for optional mSATA drive, internal
(Bay 4 is not available on slim optical models)

Notes:

Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only

Expansion Slots

- Low Profile, PCIe 3.0 x16 (40w max, near CPU)
- Low Profile, PCIe 2.0 x1
- Low Profile, PCIe 2.0 x16 (x4 elec, 40W max)
- Low Profile, PCI 2.3

Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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(30A3-1) August 2013

ThinkStation E32 SFF (30A3) - TopSeller (August 2013) - II

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ^{**}	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A3001TUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001UUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001VUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xNVS 310 (512MB, 2xDisplayPort, 19.5W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001WUS	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001XUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001YUS	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A30020US	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)

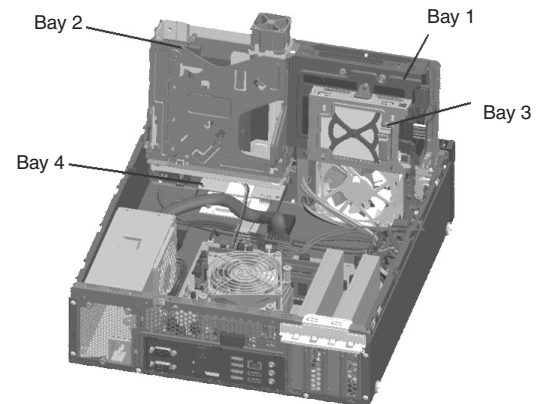
¹ Model in *italics* shows that this is a Global Model

^{**} DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (40W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 40W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays*



* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)

- Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay
Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following:
(1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional
(2) 3.5" 2nd hard drive bay (internal), optional
Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay
Bay 4 Optional, 3.5", 0.5" high, supports one of the following:
(1) for optional slim media card reader, external
(2) for optional mSATA drive, internal
(Bay 4 is not available on slim optical models)

Notes:

Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only

Expansion Slots

- Low Profile, PCIe 3.0 x16 (40w max, near CPU)
- Low Profile, PCIe 2.0 x1
- Low Profile, PCIe 2.0 x16 (x4 elec, 40W max)
- Low Profile, PCI 2.3

Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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ThinkStation E32 SFF (30A3) - TopSeller (August 2013) - III

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ^{**}	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A30025US	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A30026US	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A30027US	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600		No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A30028US	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A30029US	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A3002AUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A3002BUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xNVS 310 (512MB, 2xDisplayPort, 19.5W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64

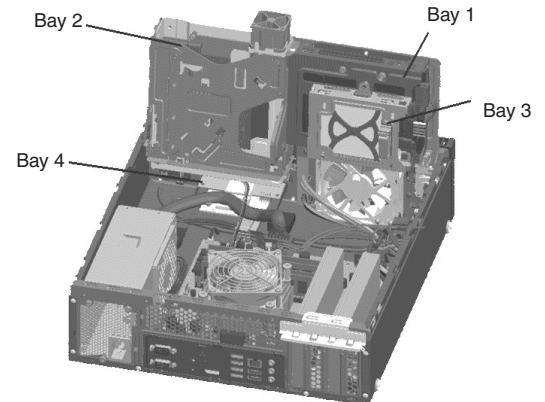
¹ Model in *italics* shows that this is a Global Model

^{**} DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (40W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 40W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel i217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays*



* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)

- Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay
- Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following:
(1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional
(2) 3.5" 2nd hard drive bay (internal), optional
- Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay
- Bay 4 Optional, 3.5", 0.5" high, supports one of the following:
(1) for optional slim media card reader, external
(2) for optional mSATA drive, internal
(Bay 4 is not available on slim optical models)

Notes:

Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only

Expansion Slots

- Low Profile, PCIe 3.0 x16 (40w max, near CPU)
- Low Profile, PCIe 2.0 x1
- Low Profile, PCIe 2.0 x16 (x4 elec, 40W max)
- Low Profile, PCI 2.3

Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

See footnotes for important warranty information
Model(s) announced August 20, 2013

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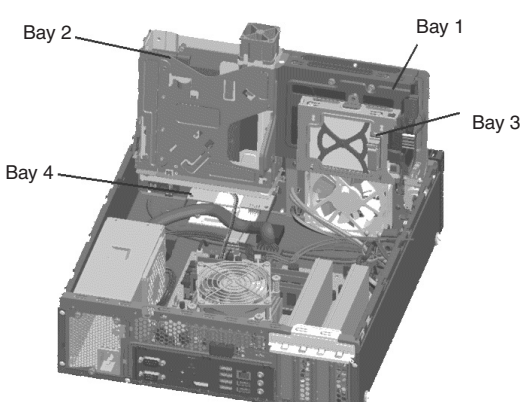
ThinkStation E32 SFF (30A3) - TopSeller (August 2013) - IV

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A3002CUS	Xeon E3-1240 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A3002DUS	Core i7-4770 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64
30A3002EUS	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A3002FUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	Media	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model ** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset	<p>Drives Bays*</p>  <p>* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)</p> <p>Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following: (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional (2) 3.5" 2nd hard drive bay (internal), optional Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay Bay 4 Optional, 3.5", 0.5" high, supports one of the following: (1) for optional slim media card reader, external (2) for optional mSATA drive, internal (Bay 4 is not available on slim optical models)</p> <p>Notes: Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only</p> <p>Expansion Slots</p> <p>1: Low Profile, PCIe 3.0 x16 (40w max, near CPU) 2: Low Profile, PCIe 2.0 x1 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40W max) 4: Low Profile, PCI 2.3</p> <p>Mechanical</p> <ul style="list-style-type: none"> • Raven black color; metal case • 13.35"W x 15.0"D x 3.93"H • 338mm W x 375mm D x 102mm H • 17.20 lb (7.8kg) max configuration • 12.9-liter • Toolless top cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Recessed power button
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors	
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors	
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable	
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)	
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Mixing of ECC and non-ECC is not supported • Intel Core i5/i7 processors support non-ECC memory only 	
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)	
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> • One PCI Express 3.0 x16 slot (40W max, near CPU) • One PCI Express 2.0 x16 slot (x4 electrical, 40W max) 	
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology	
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface	
Media reader (opt)	Optional 29-in-1 media card reader on selected models	
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)	
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM	
Security	<ul style="list-style-type: none"> • Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant • Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) • Power-on/Administrator password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement (front or all/individual) • Chassis intrusion switch available on selected models 	
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)	
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified	
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified	
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV	
Limited warranty ¹	3-year parts and labor	

See footnotes for important warranty information
 Model(s) announced August 20, 2013

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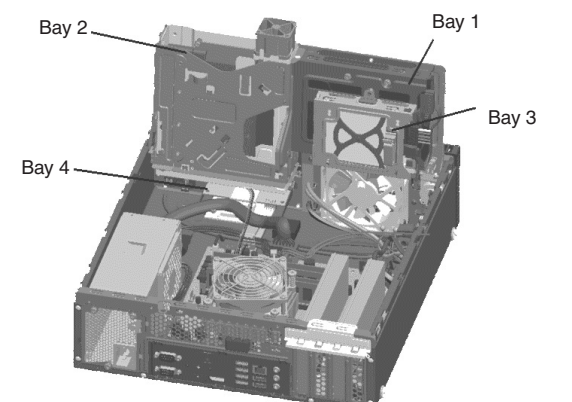
ThinkStation E32 SFF (30A3) - TopSeller (September 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ²	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A3001MUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001NUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001PUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A3001QUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A30021US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A30022US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A30023US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x500GB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64
30A30024US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model ² DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset	<p>Drives Bays*</p>  <p>* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)</p> <p>Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following: (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional (2) 3.5" 2nd hard drive bay (internal), optional Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay Bay 4 Optional, 3.5", 0.5" high, supports one of the following: (1) for optional slim media card reader, external (2) for optional mSATA drive, internal (Bay 4 is not available on slim optical models)</p> <p>Notes: Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only</p> <p>Expansion Slots 1: Low Profile, PCIe 3.0 x16 (40W max, near CPU) 2: Low Profile, PCIe 2.0 x1 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40W max) 4: Low Profile, PCI 2.3</p> <p>Mechanical • Raven black color; metal case • 13.35"W x 15.0"D x 3.93"H • 338mm W x 375mm D x 102mm H • 17.20 lb (7.8kg) max configuration • 12.9-liter • Toolless top cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Recessed power button</p>
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors	
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors	
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable	
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)	
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only 	
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)	
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: • One PCI Express 3.0 x16 slot (40W max, near CPU) • One PCI Express 2.0 x16 slot (x4 electrical, 40W max)	
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology	
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface	
Media reader (opt)	Optional 29-in-1 media card reader on selected models	
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)	
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM	
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models 	
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)	
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified	
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified	
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV	
Limited warranty ¹	3-year parts and labor	

See footnotes for important warranty information
Model(s) announced September 3, 2013

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(30A3-5) September 2013

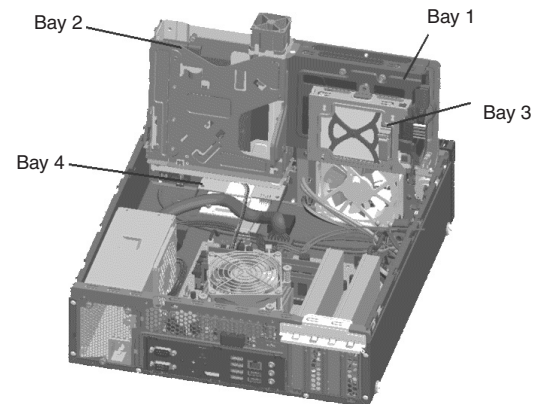
Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A2001WUS	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A2001XUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A2001YUS	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A20020US	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A20021US	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A20022US	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A20023US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x256GB SATA SSD	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

¹ Model in *italics* shows that this is a Global Model² DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (40W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 40W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays*



* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)

- Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay
 Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following:
 (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional
 (2) 3.5" 2nd hard drive bay (internal), optional
 Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay
 Bay 4 Optional, 3.5", 0.5" high, supports one of the following:
 (1) for optional slim media card reader, external
 (2) for optional mSATA drive, internal
 (Bay 4 is not available on slim optical models)

Notes:

Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only

Expansion Slots

- Low Profile, PCIe 3.0 x16 (40W max, near CPU)
- Low Profile, PCIe 2.0 x1
- Low Profile, PCIe 2.0 x16 (x4 elec, 40W max)
- Low Profile, PCI 2.3

Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

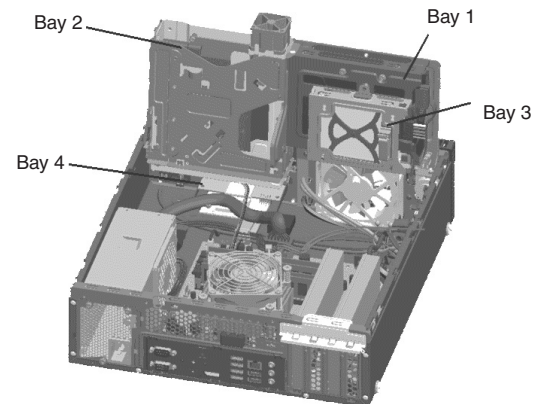
Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A20024US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A20027US	Core i5-4570 (4C/3.2GHz/6MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64
30A20028US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64
30A20029US	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64
30A2002AUS	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD P4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64
30A2002BUS	Core i5-4670 (4C/3.4GHz/6MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64
30A2002CUS	Core i7-4770 (4C/3.4GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	No	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model² DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (40W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 40W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays*



* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)

- Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay
 Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following:
 (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional
 (2) 3.5" 2nd hard drive bay (internal), optional
 Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay
 Bay 4 Optional, 3.5", 0.5" high, supports one of the following:
 (1) for optional slim media card reader, external
 (2) for optional mSATA drive, internal
 (Bay 4 is not available on slim optical models)

Notes:

Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only

Expansion Slots

- Low Profile, PCIe 3.0 x16 (40w max, near CPU)
- Low Profile, PCIe 2.0 x1
- Low Profile, PCIe 2.0 x16 (x4 elec, 40W max)
- Low Profile, PCI 2.3

Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters**	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A2002DUS	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x256GB SATA SSD	DVD±RW	No	No	Switch	Win8 Pro64
30A2002EUS	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz Non-ECC	8GBx1		1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64

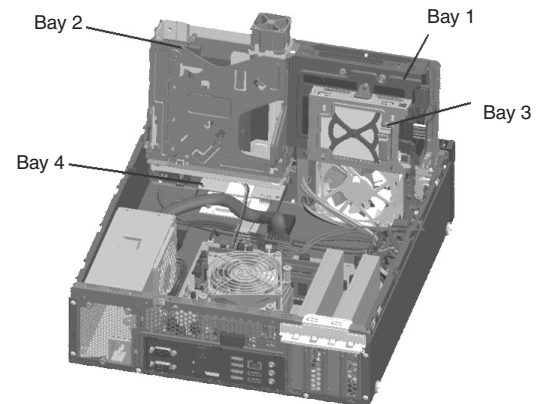
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

- For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications](#) sheet

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (40W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 40W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays*



* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)

- Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay
 Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following:
 (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional
 (2) 3.5" 2nd hard drive bay (internal), optional
 Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay
 Bay 4 Optional, 3.5", 0.5" high, supports one of the following:
 (1) for optional slim media card reader, external
 (2) for optional mSATA drive, internal
 (Bay 4 is not available on slim optical models)

Notes:

Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only

Expansion Slots

- Low Profile, PCIe 3.0 x16 (40w max, near CPU)
- Low Profile, PCIe 2.0 x1
- Low Profile, PCIe 2.0 x16 (x4 elec, 40W max)
- Low Profile, PCI 2.3

Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ²	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	1394 adptr	Chassis intrusion switch	Preloaded OS
30A2001UUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A2001VUS	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
30A20025US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600		No	1x500GB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64
30A20026US	Core i3-4330 (2C/3.5GHz/4MB/1600MHz)	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	1x500GB 3.5" SATA	DVD±RW	No	No	Switch	Win8 Pro64

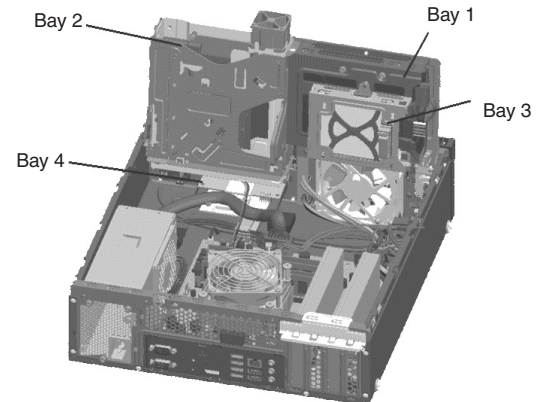
* Model in *italics* shows that this is a Global Model

** DL = Dual Link, SL = Single Link

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of ECC and non-ECC is not supported Intel Core i5/i7 processors support non-ECC memory only
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> One PCI Express 3.0 x16 slot (40W max, near CPU) One PCI Express 2.0 x16 slot (x4 electrical, 40W max)
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel i217LM
Security	<ul style="list-style-type: none"> Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on/Administrator password Boot sequence control Boot without keyboard, mouse Serial port I/O control USB port disablement (front or all/individual) Chassis intrusion switch available on selected models
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV
Limited warranty ¹	3-year parts and labor

Drives Bays*



* Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)

- Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay
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 (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional
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 Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay
 Bay 4 Optional, 3.5", 0.5" high, supports one of the following:
 (1) for optional slim media card reader, external
 (2) for optional mSATA drive, internal
 (Bay 4 is not available on slim optical models)

Notes:

Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only

Expansion Slots

- Low Profile, PCIe 3.0 x16 (40w max, near CPU)
- Low Profile, PCIe 2.0 x1
- Low Profile, PCIe 2.0 x16 (x4 elec, 40W max)
- Low Profile, PCI 2.3

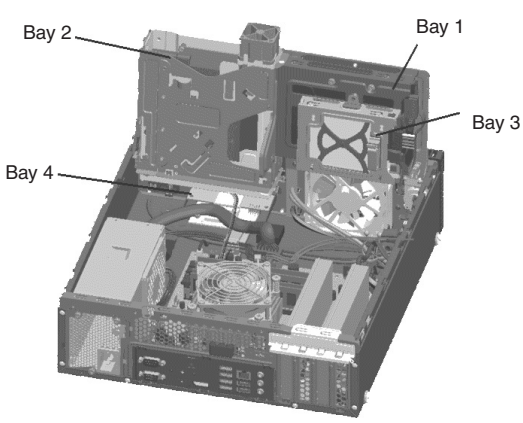
Mechanical

- Raven black color; metal case
- 13.35"W x 15.0"D x 3.93"H
- 338mm W x 375mm D x 102mm H
- 17.20 lb (7.8kg) max configuration
- 12.9-liter
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Type-model ¹	Processor	Memory (MHz/type)	Memory DIMMs	Intel HD Graphics	Discrete graphics adapters ²	Pre-conf RAID	Storage	Optical	29-in-1 Media reader	Chassis intrusion switch	Preloaded OS	Base warranty (-year) ³	Ann date (mm/dd/yy)
30A2001TUS	Xeon E3-1230 v3 4C/3.3 GHz/8 MB/1600MHz	1600MHz ECC	4GBx1	No	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	Media	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13
30A2002QUS	Core i5-4570 4C/3.2 GHz/6 MB/1600MHz	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13
30A2002PSS	Core i7-4770 4C/3.4 GHz/8 MB/1600MHz	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	No	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/15/13
30A2002QSS	Core i5-4570 4C/3.2 GHz/6 MB/1600MHz	1600MHz Non-ECC	4GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x1TB 3.5" SATA	DVD±RW	No	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13
30A2002PUS	Core i7-4770 4C/3.4 GHz/8 MB/1600MHz	1600MHz Non-ECC	8GBx1	Intel HD 4600	1xQuadro K600 1GB, 1xDVI-I DL, 1xDP, 41W)	No	1x180GB SATA SSD	DVD±RW	No	Switch	Win7 Pro64 (Downgrade from Win8)	3(IWS)	10/8/13

¹Model in italics shows that this is a Global Model ²DL = Dual Link, SL = Single Link ³IWS= International Warranty Service⁹

• For detailed ThinkStation E32 SFF platform specifications, please see [ThinkStation E32 Platform Specifications sheet](#)

Chipset	Intel C226 Chipset	 <p>Drives Bays*</p> <p>Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay</p> <p>Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following: (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional (2) 3.5" 2nd hard drive bay (internal), optional</p> <p>Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay</p> <p>Bay 4 Optional, 3.5", 0.5" high, supports one of the following: (1) for optional slim media card reader, external (2) for optional mSATA drive, internal (Bay 4 is not available on slim optical models)</p> <p>Notes: Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only</p> <p>Expansion Slots</p> <p>1: Low Profile, PCIe 3.0 x16 (40w max, near CPU) 2: Low Profile, PCIe 2.0 x1 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40W max) 4: Low Profile, PCI 2.3</p> <p>Mechanical</p> <ul style="list-style-type: none"> • Raven black color; metal case • 13.35"W x 15.0"D x 3.93"H • 338mm W x 375mm D x 102mm H • 17.20 lb (7.8kg) max configuration • 12.9-liter • Toolless top cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Recessed power button
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors	
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors	
Memory	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable	
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC/non-ECC (8GBx4)	
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Mixing of ECC and non-ECC is not supported • Intel Core i5/i7 processors support non-ECC memory only 	
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on selected processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)	
Discrete graphics adapters	Two PCI Express x16 slots for discrete graphics adapters: <ul style="list-style-type: none"> • One PCI Express 3.0 x16 slot (40W max, near CPU) • One PCI Express 2.0 x16 slot (x4 electrical, 40W max) 	
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology	
Storage	Up to two 3.5" SATA (SATA 6.0Gb/s, 7200rpm) drives, or up to three 2.5" SATA (SATA 6.0Gb/s, 10000rpm)/SATA SSD (SATA 6.0Gb/s) drives; up to one mSATA SSD drive (SATA 6.0Gb/s)	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface	
Media reader (opt)	Optional 29-in-1 media card reader on selected models	
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)	
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (opt)	Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel I217LM	
Security	<ul style="list-style-type: none"> • Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant • Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) • Power-on/Administrator password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement (front or all/individual) • Chassis intrusion switch available on selected models 	
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)	
Power supply	240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified	
Environmental certifications	GREENGUARD® certified/RoHS-compliant/EPEAT™ Gold rating/ENERGY STAR 5.2 qualified	
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV	
Limited warranty ¹	3-year parts and labor	

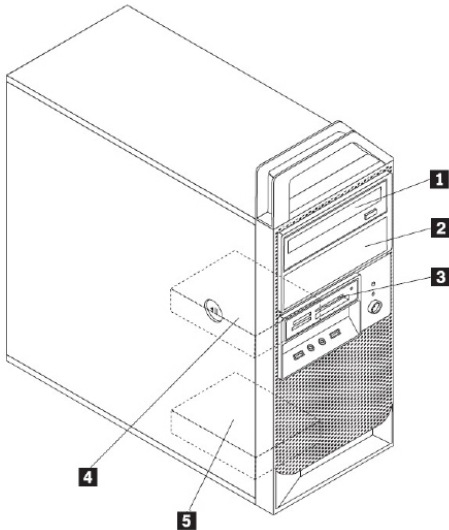
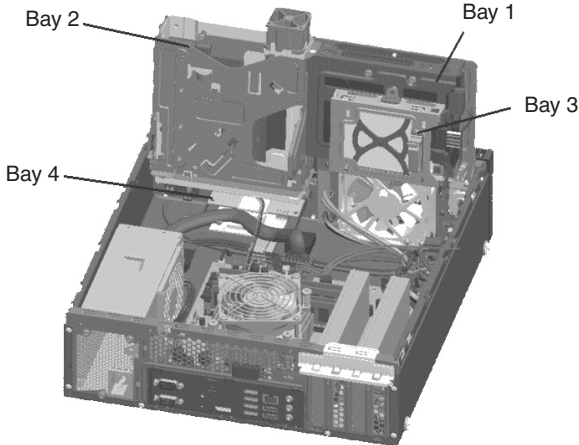
ThinkStation E32 Platform Specifications - I of III

Product Specifications Reference (PSREF)

From factor	ThinkStation E32 Tower	ThinkStation E32 SFF																																																																																																																																																																		
Chipset	Intel C226 Chipset																																																																																																																																																																			
Intel AMT	Intel Active Management Technology 9 supported on models with Intel Xeon processors																																																																																																																																																																			
Processor	<p>One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3, Core i7-4000, Core-i5 4000, Core-i3 4000, and Pentium G3000 families, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors.</p> <p>The following processors are supported:</p> <table><tr><th>Processor Number</th><th># of Cores</th><th># of Threads</th><th>Clock Speed</th><th>Max Turbo Frequency</th><th>Cache</th><th>Memory speed</th><th>ECC Memory Supported</th><th>Processor Graphics</th></tr><tr><td>Xeon E3-1220 v3</td><td>4</td><td>4</td><td>3.1 GHz</td><td>3.5 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1225 v3</td><td>4</td><td>4</td><td>3.2 GHz</td><td>3.6 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr><tr><td>Xeon E3-1230 v3</td><td>4</td><td>8</td><td>3.3 GHz</td><td>3.7 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1240 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1245 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr><tr><td>Xeon E3-1270 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1275 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr><tr><td>Xeon E3-1280 v3</td><td>4</td><td>8</td><td>3.6 GHz</td><td>4 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Core i5-4670</td><td>4</td><td>4</td><td>3.4 GHz</td><td>3.8 GHz</td><td>6 MB</td><td>DDR3-1600</td><td></td><td>Intel HD Graphics 4600</td></tr><tr><td>Core i5-4570</td><td>4</td><td>4</td><td>3.2 GHz</td><td>3.6 GHz</td><td>6 MB</td><td>DDR3-1600</td><td></td><td>Intel HD Graphics 4600</td></tr><tr><td>Core i7-4770</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td></td><td>Intel HD Graphics 4600</td></tr><tr><td>Core i3-4340</td><td>2</td><td>4</td><td>3.6 GHz</td><td></td><td>4 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr><tr><td>Core i3-4330</td><td>2</td><td>4</td><td>3.5 GHz</td><td></td><td>4 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr><tr><td>Core i3-4130</td><td>2</td><td>4</td><td>3.4 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4400</td></tr><tr><td>Pentium G3430</td><td>2</td><td>2</td><td>3.3 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics</td></tr><tr><td>Pentium G3420</td><td>2</td><td>2</td><td>3.2 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics</td></tr><tr><td>Pentium G3220</td><td>2</td><td>2</td><td>3 GHz</td><td></td><td>3 MB</td><td>DDR3-1333</td><td>Yes</td><td>Intel HD Graphics</td></tr></table> <p>Notes: All processors information is provided by Intel and may be changed at any time without notice. The information herein is provided “as-is”. Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/</p>		Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics	Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes		Core i5-4670	4	4	3.4 GHz	3.8 GHz	6 MB	DDR3-1600		Intel HD Graphics 4600	Core i5-4570	4	4	3.2 GHz	3.6 GHz	6 MB	DDR3-1600		Intel HD Graphics 4600	Core i7-4770	4	8	3.4 GHz	3.9 GHz	8 MB	DDR3-1600		Intel HD Graphics 4600	Core i3-4340	2	4	3.6 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Core i3-4330	2	4	3.5 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Core i3-4130	2	4	3.4 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics 4400	Pentium G3430	2	2	3.3 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics	Pentium G3420	2	2	3.2 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics	Pentium G3220	2	2	3 GHz		3 MB	DDR3-1333	Yes	Intel HD Graphics
Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics																																																																																																																																																												
Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes																																																																																																																																																													
Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																																																																																												
Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes																																																																																																																																																													
Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes																																																																																																																																																													
Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																																																																																												
Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes																																																																																																																																																													
Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																																																																																												
Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes																																																																																																																																																													
Core i5-4670	4	4	3.4 GHz	3.8 GHz	6 MB	DDR3-1600		Intel HD Graphics 4600																																																																																																																																																												
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Core i7-4770	4	8	3.4 GHz	3.9 GHz	8 MB	DDR3-1600		Intel HD Graphics 4600																																																																																																																																																												
Core i3-4340	2	4	3.6 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																																												
Core i3-4330	2	4	3.5 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																																												
Core i3-4130	2	4	3.4 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics 4400																																																																																																																																																												
Pentium G3430	2	2	3.3 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics																																																																																																																																																												
Pentium G3420	2	2	3.2 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics																																																																																																																																																												
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Memory type	1600MHz UDIMM, DDR3, ECC or non-ECC, 2-channel capable																																																																																																																																																																			
Memory DIMM sockets	Four 240-pin DIMM sockets																																																																																																																																																																			
Memory capacity	Up to 32GB ECC/non-ECC (8GBx4)																																																																																																																																																																			
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsMixing of ECC and non-ECC is not supported																																																																																																																																																																			
Intel HD Graphics in processor (optional)	Integrated Intel HD Graphics on Pentium, Core i3, i5, i7 and Xeon E3-12x5 v3 pocessors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)																																																																																																																																																																			
Discrete Graphics adapters	<div>Two PCI Express x16 slots for discrete graphics adapters:<ul style="list-style-type: none">One PCI Express 3.0 x16 slot (75W max, near CPU)One PCI Express 2.0 x16 slot (x4 electrical, 75W max)</div> <div>Two PCI Express x16 slots for discrete graphics adapters:<ul style="list-style-type: none">One PCI Express 3.0 x16 slot (40W max, near CPU)One PCI Express 2.0 x16 slot (x4 electrical, 40W max)</div> <p>Supports the following NVIDIA Quadro, NVS graphics adapters:</p> <table><tr><th rowspan="2"></th><th rowspan="2">Memory Size</th><th rowspan="2">CUDA Processor Cores</th><th rowspan="2">Display Connectors</th><th rowspan="2">Max. Displays</th><th rowspan="2">Power</th><th colspan="2">Supported on ThinkStation</th></tr><tr><th>E32 Tower</th><th>E32 SFF</th></tr><tr><td>Quadro K2000</td><td>2GB</td><td>384</td><td>1 dual-link DVI-I 2 DisplayPort</td><td>4*</td><td>51W</td><td>•</td><td></td></tr><tr><td>Quadro K2000D</td><td>2GB</td><td>384</td><td>1 dual-link DVI-I 1 dual-link DVI-D 1 mini DisplayPort</td><td>4*</td><td>51W</td><td>•</td><td></td></tr><tr><td>Quadro K600</td><td>1GB</td><td>192</td><td>1 dual-link DVI-I 1 DisplayPort</td><td>2</td><td>41W</td><td>•</td><td>•</td></tr><tr><td>Quadro 410</td><td>512MB</td><td>192</td><td>1 dual-link DVI-I 1 DisplayPort</td><td>2</td><td>37W</td><td>•</td><td>•</td></tr><tr><td>NVS 510</td><td>2GB</td><td>192</td><td>4 mini DisplayPort (with 4 mini DP to DP dongles)</td><td>4</td><td>35W</td><td>•</td><td>•</td></tr></table> <p>* Quadro K2000 and Quadro K2000D are equipped with 3 onboard display connectors, 4 Displays require a supported DisplayPort 1.2 Multi-Stream capable hub or displays.</p>			Memory Size	CUDA Processor Cores	Display Connectors	Max. Displays	Power	Supported on ThinkStation		E32 Tower	E32 SFF	Quadro K2000	2GB	384	1 dual-link DVI-I 2 DisplayPort	4*	51W	•		Quadro K2000D	2GB	384	1 dual-link DVI-I 1 dual-link DVI-D 1 mini DisplayPort	4*	51W	•		Quadro K600	1GB	192	1 dual-link DVI-I 1 DisplayPort	2	41W	•	•	Quadro 410	512MB	192	1 dual-link DVI-I 1 DisplayPort	2	37W	•	•	NVS 510	2GB	192	4 mini DisplayPort (with 4 mini DP to DP dongles)	4	35W	•	•																																																																																																																
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Quadro K2000	2GB	384	1 dual-link DVI-I 2 DisplayPort	4*	51W	•																																																																																																																																																														
Quadro K2000D	2GB	384	1 dual-link DVI-I 1 dual-link DVI-D 1 mini DisplayPort	4*	51W	•																																																																																																																																																														
Quadro K600	1GB	192	1 dual-link DVI-I 1 DisplayPort	2	41W	•	•																																																																																																																																																													
Quadro 410	512MB	192	1 dual-link DVI-I 1 DisplayPort	2	37W	•	•																																																																																																																																																													
NVS 510	2GB	192	4 mini DisplayPort (with 4 mini DP to DP dongles)	4	35W	•	•																																																																																																																																																													

ThinkStation E32 Platform Specifications - II of III

Product Specifications Reference (PSREF)

From factor	ThinkStation E32 Tower				ThinkStation E32 SFF			
Discrete Graphics adapters	NVS 315	Memory Size	CUDA Processor Cores	Display Connectors	Max. Displays	Power	Supported on ThinkStation	
							E32 Tower	E32 SFF
							•	•
	NVS 310	512 MB	48	2 DisplayPort	2	19.5W	•	•
Onboard drive controllers	Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5 support, supports Intel Smart Response Technology				Four SATA connectors via onboard drive controller in chipset, SATA 6.0Gb/s, RAID 0, 1 support, supports Intel Smart Response Technology			
Drive Bays	 <p>Bay 1 Standard, 5.25", 1.6" high, external, for optical Bay 2 Standard, 5.25", 1.6" high, external, for optical or optional, 3.5", 1" high, 3rd hard drive bay Bay 3 Optional, 3.5", 1" high, supports one of the following: (1) for optional media card reader, external (2) for optional mSATA drive, internal Bay 4 Standard, 3.5", 1" high, internal, primary hard drive bay Bay 5 Standard, 3.5", 1" high, internal, 2nd hard drive bay</p> <p><i>Notes:</i> Standard optical and hard drive bays are included in models; optional hard drive bays are available on models with the corresponding hard drives only</p>				 <p>Image above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 2) and optional 2.5" 3rd hard drive bay (Bay 3)</p> <p>Bay 1 Standard, 3.5", 1" high, internal, primary hard drive bay Bay 2 Standard, 5.25", 1.6" high, external, for optical, also supports one of the following: (1) 5.25" slim optical (access) and 3.5" 2nd hard drive bay (internal), optional (2) 3.5" 2nd hard drive bay (internal), optional Bay 3 Optional, 2.5", 0.6" high, internal, 3rd hard drive bay Bay 4 Optional, 3.5", 0.5" high, supports one of the following: (1) for optional slim media card reader, external (2) for optional mSATA drive, internal (Bay 4 is not available on slim optical models)</p> <p><i>Notes:</i> Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives only</p>			
Hard drive(s)	Supports the following: 3.5" SATA: SATA 6.0Gb/s, 7200 rpm, up to 3TB (250GB/500GB/1TB/2TB/3TB) 2.5" SATA: SATA 6.0Gb/s, 10000 rpm, up to 1TB (250GB/500GB/1TB) 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models, up to 480GB (128GB/180GB/240GB/256GB/480GB) mSATA: mSATA SSD, SATA 6.0Gb/s, 24GB or 128GB (24GB mSATA SSD is only for Intel Smart Response Technology enabled models)							
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high, SATA interface				Supports DVD-ROM, DVD±RW, or Blu-ray Burner, 1.6" high or slim, SATA interface			
Media reader (opt)	Optional 29-in-1 media card reader on selected models				Optional 29-in-1 media card reader (slim) on selected models			
Front ports	Two USB 3.0 (blue), microphone (3.5mm), headphone (3.5mm)							
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)							
Expansion slots	Slot 1: half-length, full-height, PCIe 3.0 x16 (75w max, near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec, 75W max) Slot 4: half-length, full-height, PCI 2.3				Slot 1: Low Profile, PCIe 3.0 x16 (40w max, near CPU) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x16 (x4 elec, 40W max) Slot 4: Low Profile, PCI 2.3			
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear				Optional Low Profile FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec							
Speaker	Internal speaker for business audio							
Onboard Ethernet	One onboard gigabit ethernet, Intel i217LM							
Keyboard	Preferred Pro USB Keyboard (USB connector)							
Mouse	Optical Wheel Mouse, red wheel (USB connector)							
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified				240 watts with variable speed fan, autosensing, 85% PSU, Climate Savers Computing Bronze, 80 PLUS Bronze qualified			

ThinkStation E32 Platform Specifications - III of III

Product Specifications Reference (PSREF)

From factor	ThinkStation E32 Tower	ThinkStation E32 SFF	
Security	<ul style="list-style-type: none">• Security chip: STMicro ST33ZP24AR28PVSP, TCG 1.2-compliant• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement (front or all/individual)• Chassis intrusion switch available on selected models		
Mechanical	<ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 17.0"D x 16.7"H (with handle)• 175mm W x 431mm D x 425mm H• 27.56 lb (12.5kg) max configuration• 25-liter	<ul style="list-style-type: none">• Raven black color; metal case• 13.35"W x 15.0"D x 3.93"H• 338mm W x 375mm D x 102mm H• 17.20 lb (7.8kg) max configuration• 12.9-liter	
Serviceability	<ul style="list-style-type: none">• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal (standard bays)• Toolless adapter retention• Illuminated front icons• Recessed power button	<ul style="list-style-type: none">• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Recessed power button	
Environmental certifications	<ul style="list-style-type: none">• GREENGUARD® certified• RoHS-compliant• EPEAT™ Gold rating• ENERGY STAR 5.2-compliant		
Warranty	1 or 3-year limited warranty, parts and labor		
ThinkVantage®	Supports ThinkVantage technologies		
Preloaded operating systems	<i>One the following, depending on model:</i> <ul style="list-style-type: none">• Windows 7 Professional 64• Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit• Windows 8 Pro 64-bit		
Preloaded applications (only some listed)		<div>Preloaded OS</div> <div>Windows 7Windows 8</div>	Note
	Intel AppUp	••	
	PC Device Stage	••	
	Evernote	•	
	Lenovo Companion	•	
	Lenovo Solution Center	••	
	Lenovo Support	•	
	Norton Internet Security (30 days of virus definitions)	••	
	Norton Studio	•	
	Skype	••	
	Cyberlink PowerDVD	••	On models with DVD ROM, DVD±RW and BluRay
	Cyberlink PowerDVD Create	••	On models with DVD±RW
	Cyberlink Power2Go	••	On models with DVD±RW
	Cyberlink Power Producer	••	On models with DVD±RW
	Cyberlink PowerDVD Create	••	On models with Blu-Ray
	Cyberlink Power2Go	••	On models with Blu-Ray
	Cyberlink Power Producer	••	On models with Blu-Ray
	Microsoft Office preloaded, purchase product key to activate	••	
AutoCAD LT	••	Only on models with Xeon processor	
ISV certifications	For the latest list of certifications, please visit www.lenovo.com/support/ISV		

ThinkStation E32 Optional Configurations

Partial list of core options supported on ThinkStation E32 Tower and SFF

Memory		ThinkStation E32 Tower	ThinkStation E32 SFF
2GB DDR3 1600 (PC3 12800) UDIMM Memory	0A65728	Yes	Yes
4GB DDR3 1600 (PC3 12800) UDIMM Memory	0A65729	Yes	Yes
2GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	43R2033	Yes	Yes
4GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	57Y4138	Yes	Yes
8GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	0A65718	Yes	Yes
2GB DDR3 1600 (PC3 12800) ECC UDIMM Workstation Memory	0B47376	Yes	Yes
4GB DDR3 1600 (PC3 12800) ECC UDIMM Workstation Memory	0B47377	Yes	Yes
8GB DDR3 1600 (PC3 12800) ECC UDIMM Workstation Memory	0B47378	Yes	Yes
Disk Drive			
Lenovo 250GB 7200 rpm Serial ATA Hard Drive	41N3015	Yes	Yes
Lenovo 500GB 7200 rpm Serial ATA Hard Drive	43R1990	Yes	Yes
Lenovo 1TB 7200 rpm Serial ATA Hard Drive	45J7918	Yes	Yes
ThinkStation 180GB Solid State Drive	0B47308	Yes	Yes
ThinkStation 128GB SATA 2.5" SSD	4XB0F18670	Yes	Yes
ThinkStation 256GB SATA 2.5" SSD	4XB0F18671	Yes	Yes
ThinkStation 256GB SATA 2.5" SSD - OPAL	4XB0F22432	Yes	Yes
Graphics			
NVIDIA NVS 310 512MB Dual DisplayPort Adapter (SFF, Tower)	0B47074	Yes	Yes
NVIDIA NVS 510 2GB Quad Mini-DisplayPort Graphics (SFF, Tower)	0B47077	Yes	Yes
NVIDIA Quadro 410 512MB Single DVI & Single DisplayPort (SFF, Tower)	0B47075	Yes	Yes
NVIDIA Quadro K600 1GB Single DVI & Single DisplayPort (Tower Only)	0B47394	Yes	
NVIDIA Quadro K2000 2GB Single DVI & Dual DisplayPort (Tower Only)	0B47392	Yes	

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkStation



Lenovo ThinkStation S30



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ThinkStation S30 Platform Specifications - I of IV

Product Specifications Reference (PSREF)

Text in red shows that these features only apply to MT type 0568, 0569, and 0606 models, text in green shows that the features are supported on other models except MT type 0568, 0569, and 0606 models

Chipset	Intel C602 Chipset										
Intel AMT	MT type 0568, 0569, and 0606: Intel Active Management Technology 7 Others MT types: Intel Active Management Technology 8										
Processor	One LGA2011 socket, supports one processor from Intel Xeon E5-2600 E5-2600 v2, E5-1600, and E5-1600 v2 family, integrated 4-channel DDR3 memory controller, supports the following:										
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Intel QPI Speed	# of QPI Links	Max TDP	Memory Speed	Intel vPro technology
	Xeon E5-2603	4	4	1.8 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro
	Xeon E5-2609	4	4	2.4 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro
	Xeon E5-2620	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	60 W	1333MHz	vPro
	Xeon E5-2637	2	4	3 GHz	3.5 GHz	5 MB	8 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2640	6	12	2.5 GHz	3 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2650	8	16	2 GHz	2.8 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20 MB	8 GT/s	2	70 W	1600MHz	vPro
	Xeon E5-2660	8	16	2.2 GHz	3 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro
	Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro
	Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2690	8	16	2.9 GHz	3.8 GHz	20 MB	8 GT/s	2	135 W	1600MHz	vPro
	Xeon E5-1603	4	4	2.8 GHz		10 MB			130 W	1066MHz	vPro
	Xeon E5-1607	4	4	3 GHz		10 MB			130 W	1066MHz	vPro
	Xeon E5-1620	4	8	3.6 GHz	3.8 GHz	10 MB			130 W	1600MHz	vPro
	Xeon E5-1650	6	12	3.2 GHz	3.8 GHz	12 MB			130 W	1600MHz	vPro
	Xeon E5-1660	6	12	3.3 GHz	3.9 GHz	15 MB			130 W	1600MHz	vPro
	Xeon E5-2603 v2	4	4	1.8 GHz	1.8 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro
	Xeon E5-2609 v2	4	4	2.5 GHz	2.5 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro
	Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15 MB	7.2 GT/s	2	60 W	1600MHz	vPro
	Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2637 v2	4	8	3.5 GHz	3.8 GHz	15 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20 MB	7.2 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2643 v2	6	12	3.5 GHz	3.8 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25 MB	7.2 GT/s	2	70 W	1600MHz	vPro
	Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20 MB	8 GT/s	2	95 W	1866MHz	vPro
	Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25 MB	8 GT/s	2	95 W	1866MHz	vPro
	Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-1607 v2	4	4	3 GHz		10 MB			130 W	1600MHz	vPro
	Xeon E5-1620 v2	4	8	3.7 GHz	3.9 GHz	10 MB			130 W	1866MHz	vPro
	Xeon E5-1650 v2	6	12	3.5 GHz	3.9 GHz	12 MB			130 W	1866MHz	vPro
	Xeon E5-1660 v2	6	12	3.7 GHz	4 GHz	15 MB			130 W	1866MHz	vPro

Notes:

1. ThinkStation S30 support one processor.
2. Intel Xeon processor numbering system is an alpha numeric representation of product line, product family and version. An 'L' suffix will be used to identify a low power processor.
More details please see http://www.intel.com/products/processor_number
3. All information is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see <http://ark.intel.com/products/family/59138/Intel-Xeon-Processor-E5-Family/server>

ThinkStation S30 Platform Specifications - II of IV

Product Specifications Reference (PSREF)

Text in red shows that these features only apply to MT type 0568, 0569, and 0606 models, text in green shows that the features are supported on other models except MT type 0568, 0569, and 0606 models

Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)					
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of RDIMM and UDIMM is not supported 					
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology (Quadro 5000 and Quadro K5000 SLI), NVIDIA Maximus technology, supports the following NVIDIA Quadro, NVS graphics adapters and Tesla GPU computing processors:					
	Memory Size	CUDA Processor Cores	Display Connectors	Max. Displays	# of slots	Power
NVIDIA Quadro and NVS Graphics						
Quadro K6000	12GB	2880	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	225W
Quadro K5000	4GB	1536	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	122W
Quadro K4000	3GB	768	1 dual-link DVI-I 2 DisplayPort	4*	1	80W
Quadro K2000	2GB	384	1 dual-link DVI-I 2 DisplayPort	4*	1	51W
Quadro K2000D	2GB	384	1 dual-link DVI-I 1 dual-link DVI-D 1 mini DisplayPort	4*	1	51W
Quadro K600	1GB	192	1 dual-link DVI-I 1 DisplayPort	2	1	41W
Quadro 410	512MB	192	1 dual-link DVI-I 1 DisplayPort	2	1	37W
Quadro 6000	6GB	448	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	2	204W
Quadro 5000	2.5GB	352	1 dual-link DVI-I 2 DisplayPort, 1 Stereo	2	2	152W
Quadro 4000	2GB	256	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	1	142W
Quadro 2000	1GB	192	1 dual-link DVI-I 2 DisplayPort	2	1	62W
Quadro 2000D	1GB	192	2 dual-link DVI-I	2	1	62W
Quadro 600	1GB	96	1 dual-link DVI-I 1 DisplayPort	2	1	40W
NVS 510	2048 MB	192	4 mini DisplayPort (with 4 mini DP to DP dongles)	4	1	35W
NVS 315	1024MB	48	DMS59 to dual single-link DVI-I or dual DisplayPort	2	1	19.5W
NVS 310	512 MB	48	2 DisplayPort	2	1	19.5W
NVS 300	512 MB	16	DMS59 to dual single- link DVI-I	2	1	17.5W
NVIDIA Tesla GPU Computing Processors (as part of NVIDIA Maximus Platform)						
Tesla K20	5GB	2496				225W
Tesla C2075	6GB	448				225W

* Quadro K4000, K2000, and K2000D are equipped with 3 onboard display connectors, 4 Displays require a supported DisplayPort 1.2 Multi-Stream capable hub or displays

Notes:

- ThinkStation S30 support NVIDIA Maximus technology. Maximus technology combines the visualization and interactive design capability of NVIDIA Quadro graphics and the high performance computing power of NVIDIA Tesla GPU computing processors in a single workstation. For more information on the latest Maximus certifications for ThinkStation and how to build Maximus system, please see www.nvidia.com/object/maximus.html
- CUDA Processor Cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.

Product Specifications Reference (PSREF)

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ISV certifications	Please visit www.lenovo.com/support/ISV
Environmental certifications	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Warranty	1 or 3-year limited warranty, parts and labor
ThinkVantage®	Supports ThinkVantage® technologies
Preloaded operating systems	One the following, depending on model: <ul style="list-style-type: none"> • Windows® 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit
Preloaded applications (only some listed)	For Windows 7 models: <ul style="list-style-type: none"> • Rescue and Recovery® • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW model(s)) • Ulead® DVD MovieFactory® (DVD±RW model(s)) For Windows 8 models: <ul style="list-style-type: none"> • Evernote® • Norton Internet Security (30 days of virus definitions) • Norton Studio • Skype™ • Microsoft Office 2013 preloaded; purchase product key to activate • Cyberlink Power2Go (DVD±RW model(s)) • Cyberlink PowerProducer (DVD±RW model(s))

ThinkStation S30 (4352) - TopSeller (June 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-55U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-57U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro 410 (512MB, 1xDVI-I DL*, 1xDP, 37W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-58U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-59U	E5-1620 (4C/3.6GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-62U	E5-1620 (4C/3.6GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)

¹ Model in *italics* shows that this is a Global Model

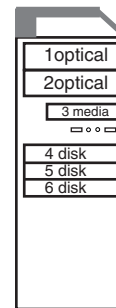
² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4351/4352 and beyond, ThinkStation S30 introduces new updates to improve the functionality and usability:**
 - (These new features are not supported on 0568, 0569, and 0606 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- **For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications](#) sheet**

Chipset	Intel C602 Chipset
Processor	One LGA2011 socket, supports one processor from Intel Xeon E5-2600 and E5-1600 family, integrated 4-channel DDR3 memory controller
Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Mixing of RDIMM and UDIMM is not supported
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology
Onboard drive controllers	<ul style="list-style-type: none"> • Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support; • Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support
Discrete drive controller (opt)	<i>One the following, depending on model:</i> LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Media reader (opt)	Optional media card reader on selected models
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none"> • Windows 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit

Tower



- Raven black color; metal case
- 6.9"W x 18.1"D x 18.8"H (with handle)
- 175mm W x 460mm D x 478mm H
- 38.5 lb (17.5kg) max configuration
- 31-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1-2: 5.25", 1.6" high, external, for optical
 Bay 3: 3.5", 1" high, external, for media reader
 Bay 4-6: 3.5", 1" high, internal, for hard drive

Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)
 Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)
 Slot 3: full-length, full-height, PCIe 3.0 x16**
 Slot 4: full-length, full-height, 32-bit PCI 2.3
 Slot 5: half-length, full-height, PCIe 2.0 x4

** Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

Intel AMT

Intel Active Management Technology 8

ISV certifications

Please visit www.lenovo.com/support/ISV

Environmental certifications

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

Supports ThinkVantage® technologies

See footnotes for important warranty information
 Model(s) announced June 18, 2013

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 (FOR1-4) June 2013

ThinkStation S30 (4352) - TopSeller (June 2013) - II

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-63U	E5-1650 (6C/3.2GHz/12MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K4000 (3GB, 1xDVI-I DL*, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-64U	E5-1650 (6C/3.2GHz/12MB/1600)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	29-in-1	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-67U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	Switch	Win8 Pro64
4352-68U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	No	No	Switch	Win8 Pro64
4352-69U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model

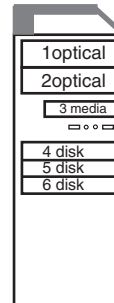
² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4351/4352 and beyond, ThinkStation S30 introduces new updates to improve the functionality and usability:**
 - (These new features are not supported on 0568, 0569, and 0606 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset
Processor	One LGA2011 socket, supports one processor from Intel Xeon E5-2600 and E5-1600 family, integrated 4-channel DDR3 memory controller
Memory	UDIMM or RDIMM, ECC, DDR3, 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Mixing of RDIMM and UDIMM is not supported
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology
Onboard drive controllers	<ul style="list-style-type: none"> • Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support; • Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support
Discrete drive controller (opt)	<i>One the following, depending on model:</i> LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Media reader (opt)	Optional media card reader on selected models
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none"> • Windows 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit

Tower



- Raven black color; metal case
- 6.9"W x 18.1"D x 18.8"H (with handle)
- 175mm W x 460mm D x 478mm H
- 38.5 lb (17.5kg) max configuration
- 31-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1-2: 5.25", 1.6" high, external, for optical
 Bay 3: 3.5", 1" high, external, for media reader
 Bay 4-6: 3.5", 1" high, internal, for hard drive

Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)
 Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)
 Slot 3: full-length, full-height, PCIe 3.0 x16**
 Slot 4: full-length, full-height, 32-bit PCI 2.3
 Slot 5: half-length, full-height, PCIe 2.0 x4

** Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

Intel AMT

Intel Active Management Technology 8

ISV certifications

Please visit www.lenovo.com/support/ISV

Environmental certifications

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

Supports ThinkVantage® technologies

ThinkStation S30 (4352) - TopSeller (June 2013) - III

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-71U	E5-1620 (4C/3.6GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL*, 1xDP, 41W)	No	Switch	Win8 Pro64
4352-72U	E5-1620 (4C/3.6GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
4352-73U	E5-1650 (6C/3.2GHz/12MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4352-74U	E5-1650 (6C/3.2GHz/12MB/1600)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	29-in-1	No	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model

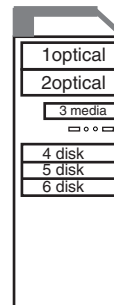
² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4351/4352 and beyond, ThinkStation S30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 0568, 0569, and 0606 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset
Processor	One LGA2011 socket, supports one processor from Intel Xeon E5-2600 and E5-1600 family, integrated 4-channel DDR3 memory controller
Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Mixing of RDIMM and UDIMM is not supported
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology
Onboard drive controllers	<ul style="list-style-type: none"> • Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support; • Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support
Discrete drive controller (opt)	<i>One the following, depending on model:</i> LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Media reader (opt)	Optional media card reader on selected models
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none"> • Windows 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit

Tower



- Raven black color; metal case
- 6.9"W x 18.1"D x 18.8"H (with handle)
- 175mm W x 460mm D x 478mm H
- 38.5 lb (17.5kg) max configuration
- 31-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1-2: 5.25", 1.6" high, external, for optical
 Bay 3: 3.5", 1" high, external, for media reader
 Bay 4-6: 3.5", 1" high, internal, for hard drive

Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)
 Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)
 Slot 3: full-length, full-height, PCIe 3.0 x16**
 Slot 4: full-length, full-height, 32-bit PCI 2.3
 Slot 5: half-length, full-height, PCIe 2.0 x4

** Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

Intel AMT

Intel Active Management Technology 8

ISV certifications

Please visit www.lenovo.com/support/ISV

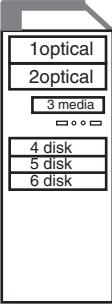
Environmental certifications

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

Supports ThinkVantage® technologies

Product Specifications Reference (PSREF)

2 The SSD drives in *italics* must be plugged into red or orange SATA connectors

- | | | | |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chipset | Intel C602 Chipset | Tower
 | <ul style="list-style-type: none"> Raven black color; metal case 6.9"W x 18.1"D x 18.8"H (with handle) 175mm W x 460mm D x 478mm H 38.5 lb (17.5kg) max configuration 31-liter Removable handle on top front Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support |
| Processor | One LGA2011 socket, supports one processor from Intel Xeon E5-2600 and E5-1600 family, integrated 4-channel DDR3 memory controller | | |
| Memory | UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8) | | |
| Additional memory disclaimers | <ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of RDIMM and UDIMM is not supported | | |
| Graphics adapters and GPU computing | Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology | | |
| Onboard drive controllers | <ul style="list-style-type: none"> Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support; Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support | | |
| Upgrade ROM for onboard drive controllers (opt) | Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support | | |
| Discrete drive controller (opt) | <i>One the following, depending on model:</i>
LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support
optional upgrade key for RAID 5 support
LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support | Bay 1-2: 5.25", 1.6" high, external, for optical
Bay 3: 3.5", 1" high, external, for media reader
Bay 4-6: 3.5", 1" high, internal, for hard drive | |
| Hard drives | 3.5" SATA: SATA 6.0Gb/s, 7200 rpm
2.5" SATA: SATA 6.0Gb/s, 10000 rpm
3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm
2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models | Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)
Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)
Slot 3: full-length, full-height, PCIe 3.0 x16**
Slot 4: full-length, full-height, 32-bit PCI 2.3
Slot 5: half-length, full-height, PCIe 2.0 x4
** Adapters >75W use auxiliary power connector(s) from PSU | |
| Optical | Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface | | |
| Media reader (opt) | Optional media card reader on selected models | | |
| Front ports | Two USB 3.0, microphone (3.5mm), headphone (3.5mm) | | |
| Rear ports | Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) | | |
| IEEE 1394 adptr (opt) | None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear | | |
| Audio | High Definition (HD) Audio, Realtek® ALC662 codec | | |
| Speaker | Internal speaker for business audio | | |
| Onboard Ethernet | One onboard gigabit ethernet, Intel 82579 | | |
| Security chip | STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant | | |
| Keyboard | Preferred Pro USB Keyboard (USB connector), 104-key, black | | |
| Mouse | Optical Wheel Mouse (USB connector), black | | |
| Power supply | 610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified | | |
| Preloaded operating systems (OS) | <i>One the following, depending on model:</i> <ul style="list-style-type: none"> Windows 7 Professional 64 Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Windows 8 Pro 64-bit | | |
| | | | SECURITY <ul style="list-style-type: none"> Security chip (see information on left) Side cover lock (ships with two identical keys) Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O enable/disable USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s) |
| | | | Intel AMT
Intel Active Management Technology 8 |
| | | | ISV certifications
Please visit www.lenovo.com/support/ISV |
| | | | Environmental certifications
GREENGUARD® certified
RoHS-compliant
EPEAT™ Gold rating |
| | | | Supports ThinkVantage® technologies |

ThinkStation S30 (4352) - TopSeller (September 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-G3U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-G4U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-G5U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-G6U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-G7U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-G8U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-G9U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)

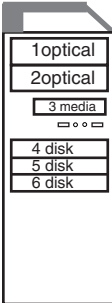
¹ Model in *italics* shows that this is a Global Model

² The SSD drives in *italics* must be plugged into red or orange SATA connectors

³ DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		
Intel AMT	Intel Active Management Technology 8 supported		
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller		
Memory	UDIMM or RDIMM, ECC, DDR3, 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Mixing of RDIMM and UDIMM is not supported		
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

Tower	
	
Bay 1-2:	5.25", 1.6" high, external, for optical
Bay 3:	3.5", 1" high, external, for media reader
Bay 4-6:	3.5", 1" high, internal, for hard drive
Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU) Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical) Slot 3: full-length, full-height, PCIe 3.0 x16** Slot 4: full-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCIe 2.0 x4	
** Adapters >75W use auxiliary power connector(s) from PSU	

SECURITY	
<ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)	

ISV certifications	
Please visit www.lenovo.com/support/ISV	

Environmental certifications	
GREENGUARD® certified	
RoHS-compliant	
EPEAT™ Gold rating	

Supports ThinkVantage® technologies	
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- Raven black color; metal case
- 6.9"W x 18.1"D x 18.8"H (with handle)
- 175mm W x 460mm D x 478mm H
- 38.5 lb (17.5kg) max configuration
- 31-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1-2: 5.25", 1.6" high, external, for optical
 Bay 3: 3.5", 1" high, external, for media reader
 Bay 4-6: 3.5", 1" high, internal, for hard drive

Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)
 Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)
 Slot 3: full-length, full-height, PCIe 3.0 x16**
 Slot 4: full-length, full-height, 32-bit PCI 2.3
 Slot 5: half-length, full-height, PCIe 2.0 x4

** Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

ISV certifications

Please visit www.lenovo.com/support/ISV

Environmental certifications

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

Supports ThinkVantage® technologies

ThinkStation S30 (4352) - TopSeller (September 2013) - II

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-H1U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-H2U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-H3U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-H4U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-H5U	E5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-H6U	E5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4352-H7U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

¹ Model in *italics* shows that this is a Global Model ² The SSD drives in *italics* must be plugged into red or orange SATA connectors ³ DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 media</div><div>4 disk</div><div>5 disk</div><div>6 disk</div></div></div><div><div>Bay 1-2: 5.25", 1.6" high, external, for optical</div><div>Bay 3: 3.5", 1" high, external, for media reader</div><div>Bay 4-6: 3.5", 1" high, internal, for hard drive</div></div><div><div>Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)</div><div>Slot 3: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 4: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 5: half-length, full-height, PCIe 2.0 x4</div></div><div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div></div><div><div>SECURITY</div><div><div><div>• Security chip (see information on left)</div><div>• Side cover lock (ships with two identical keys)</div><div>• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)</div><div>• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)</div><div>• Power-on password</div><div>• Administrator password</div><div>• Boot sequence control</div><div>• Boot without keyboard, mouse, diskette</div><div>• Serial port I/O enable/disable</div><div>• USB 2.0 ports enable/disable individually</div><div>• USB 3.0 ports enable/disable concurrently</div><div>• Chassis intrusion switch on selected model(s)</div></div></div><div><div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div></div><div><div>Environmental certifications</div><div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div><div>Supports ThinkVantage® technologies</div></div></div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller		
Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<div><div>• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs</div><div>• Mixing of RDIMM and UDIMM is not supported</div></div>		
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<div><div>• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;</div><div>• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support</div></div>		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drives	<div><div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div><div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div><div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div><div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div><div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div><div>OPAL-capable on some models</div></div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

See footnotes for important warranty information
 Model(s) announced September 10, 2013

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 (4352-6) September 2013

Type-model [†]	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-H8U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win8 Pro64
4352-H9U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	Switch	Win8 Pro64
4352-J1U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
4352-J2U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
4352-J3U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win8 Pro64
4352-J4U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
4352-J5U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>Tower</div> <div><div><div>1 optical</div><div>2 optical</div><div>3 media</div><div>4 disk</div><div>5 disk</div><div>6 disk</div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 18.1"D x 18.8"H (with handle)• 175mm W x 460mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support</div> <div>Bay 1-2: 5.25", 1.6" high, external, for optical</div> <div>Bay 3: 3.5", 1" high, external, for media reader</div> <div>Bay 4-6: 3.5", 1" high, internal, for hard drive</div> <div>Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)</div> <div>Slot 3: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 4: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 5: half-length, full-height, PCIe 2.0 x4</div> <div>** Adapters >75W use auxiliary power connector(s) from PSU</div> <div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div> <div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div> <div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>Supports ThinkVantage® technologies</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller		
Memory	UDIMM or RDIMM, ECC, DDR3, 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Mixing of RDIMM and UDIMM is not supported		
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drives	3.5" SATA:	SATA 6.0Gb/s, 7200 rpm	
	3.5" Hybrid:	SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash	
	2.5" SATA:	SATA 6.0Gb/s, 10000 rpm	
	3.5" SAS/2.5" SAS:	SAS 6.0Gb/s, 15000 rpm	
	2.5" SSD:	Solid State Drive (SSD), SATA 6.0Gb/s	
		OPAL-capable on some models	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

ThinkStation S30 (4352) - TopSeller (September 2013) - IV

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-J6U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I-DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4352-J7U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4352-J8U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64
4352-J9U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4352-K1U	E5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64
4352-K2U	E5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4352-K3U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	No	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 media</div><div>4 disk</div><div>5 disk</div><div>6 disk</div></div></div><div><div>Bay 1-2: 5.25", 1.6" high, external, for optical</div><div>Bay 3: 3.5", 1" high, external, for media reader</div><div>Bay 4-6: 3.5", 1" high, internal, for hard drive</div></div><div><div>Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)</div><div>Slot 3: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 4: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 5: half-length, full-height, PCIe 2.0 x4</div></div><div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div></div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller		
Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Mixing of RDIMM and UDIMM is not supported		
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drives	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>OPAL-capable on some models</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

<div><div>SECURITY</div><div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div></div>
<div><div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div></div>
<div><div>Environmental certifications</div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div>
Supports ThinkVantage® technologies

See footnotes for important warranty information
Model(s) announced September 10, 2013

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(4352-8) September 2013

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4352-L8U	Xeon E5-1607 v2 4C/3GHz/10MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-L9U	Xeon E5-1607 v2 4C/3GHz/10MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 1GB/1xDVI-I DL/ 1xDP/41W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M1U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M2U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M3U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	Media	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M4U	Xeon E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA(Hybrid)	DVD±RW	Media	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M5U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	4GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M6U	Xeon E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA(Hybrid)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M7U	Xeon E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4352-M8U	Xeon E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1866MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

• **3-year limited warranty**

• For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1optical</div><div>2optical</div><div>3media</div><div>4disk</div><div>5disk</div><div>6disk</div></div></div><div><div>Bay 1-2: 5.25", 1.6" high, external, for optical</div><div>Bay 3: 3.5", 1" high, external, for media reader</div><div>Bay 4-6: 3.5", 1" high, internal, for hard drive</div></div><div>Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)</div><div>Slot 3: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 4: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 5: half-length, full-height, PCIe 2.0 x4</div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller		
Memory	UDIMM or RDIMM, ECC, DDR3, 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsMixing of RDIMM and UDIMM is not supported		
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drives	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>OPAL-capable on some models</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
ISV certifications	Please visit www.lenovo.com/support/ISV		
<div>SECURITY</div> <ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)			
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div>			
Supports ThinkVantage® technologies			

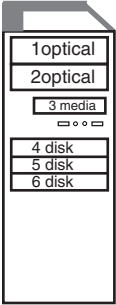
Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4351-17U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro 410 (512MB, 1xDVI-I DL*, 1xDP, 37W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-18U	E5-1620 (4C/3.6GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-19U	E5-1620 (4C/3.6GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-21U	E5-1650 (6C/3.2GHz/12MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-22U	E5-1603 (4C/2.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro 410 (512MB, 1xDVI-I DL, 1xDP, 37W)	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model

² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4351/4352 and beyond, ThinkStation S30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 0568, 0569, and 0606 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset	Tower  <ul style="list-style-type: none"> • Raven black color; metal case • 6.9"W x 18.1"D x 18.8"H (with handle) • 175mm W x 460mm D x 478mm H • 38.5 lb (17.5kg) max configuration • 31-liter • Removable handle on top front • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support
Processor	One LGA2011 socket, supports one processor from Intel Xeon E5-2600 and E5-1600 family, integrated 4-channel DDR3 memory controller	
Memory	UDIMM or RDIMM, ECC, DDR3, 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)	Bay 1-2: 5.25", 1.6" high, external, for optical Bay 3: 3.5", 1" high, external, for media reader Bay 4-6: 3.5", 1" high, internal, for hard drive Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU) Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical) Slot 3: full-length, full-height, PCIe 3.0 x16** Slot 4: full-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCIe 2.0 x4 ** Adapters >75W use auxiliary power connector(s) from PSU
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Mixing of RDIMM and UDIMM is not supported 	
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology	SECURITY <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O enable/disable • USB 2.0 ports enable/disable individually • USB 3.0 ports enable/disable concurrently • Chassis intrusion switch on selected model(s)
Onboard drive controllers	<ul style="list-style-type: none"> • Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support; • Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support 	
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support	Intel AMT Intel Active Management Technology 8 ISV certifications Please visit www.lenovo.com/support/ISV Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Discrete drive controller (opt)	<i>One the following, depending on model:</i> LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models	Supports ThinkVantage® technologies
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface	
Media reader (opt)	Optional media card reader on selected models	Intel AMT Intel Active Management Technology 8
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	ISV certifications Please visit www.lenovo.com/support/ISV Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	ISV certifications Please visit www.lenovo.com/support/ISV Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579	ISV certifications Please visit www.lenovo.com/support/ISV Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	ISV certifications Please visit www.lenovo.com/support/ISV Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	ISV certifications Please visit www.lenovo.com/support/ISV Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none"> • Windows 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit 	

Product Specifications Reference (PSREF)

¹ Model in *italics* shows that this is a Global Model

- See footnotes for important warranty information
Model(s) announced June 18, 2013

Type-model [†]	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4351-C8U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-C9U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-D1U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-D2U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-D3U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-D4U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	SAS	No	1x300GB 3.5 SAS	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-D5U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K5000 (4GB, 1xDVI-I DL, 1xDVI-D DL, 2xDP, 122W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4351-D6U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)

[†] Model in *italics* shows that this is a Global Model ^{**} The SSD drives in *italics* must be plugged into red or orange SATA connectors ^{***} DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 media</div><div>4 disk</div><div>5 disk</div><div>6 disk</div></div></div><div><div>Bay 1-2: 5.25", 1.6" high, external, for optical</div><div>Bay 3: 3.5", 1" high, external, for media reader</div><div>Bay 4-6: 3.5", 1" high, internal, for hard drive</div></div><div><div>Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)</div><div>Slot 3: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 4: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 5: half-length, full-height, PCIe 2.0 x4</div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div></div><div><div>SECURITY</div><div><div><div>• Security chip (see information on left)</div><div>• Side cover lock (ships with two identical keys)</div><div>• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)</div><div>• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)</div><div>• Power-on password</div><div>• Administrator password</div><div>• Boot sequence control</div><div>• Boot without keyboard, mouse, diskette</div><div>• Serial port I/O enable/disable</div><div>• USB 2.0 ports enable/disable individually</div><div>• USB 3.0 ports enable/disable concurrently</div><div>• Chassis intrusion switch on selected model(s)</div></div></div><div><div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div><div><div>Environmental certifications</div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div><div>Supports ThinkVantage® technologies</div></div></div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller		
Memory	UDIMM or RDIMM, ECC, DDR3, 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<div><div>• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs</div><div>• Mixing of RDIMM and UDIMM is not supported</div></div>		
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<div><div>• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;</div><div>• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support</div></div>		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drives	<div><div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div><div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div><div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div><div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div><div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div><div>OPAL-capable on some models</div></div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

Type-model [†]	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adpтр	Chassis intrusion switch	Preloaded OS
4351-D7U	E5-1607 v2 (4C/3GHz/10MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win8 Pro64
4351-D8U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
4351-D9U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
4351-E1U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4351-E2U	E5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	4GBx1	SAS	No	1x300GB 3.5 SAS	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
4351-E3U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K5000 (4GB, 1xDVI-I DL, 1xDVI-D DL, 2xDP, 122W)	No	Switch	Win8 Pro64
4351-E4U	E5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model** The SSD drives in *italics* must be plugged into red or orange SATA connectors

*** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div><div>1 optical</div><div>2 optical</div><div>3 media</div><div>4 disk</div><div>5 disk</div><div>6 disk</div></div><div><p>Bay 1-2: 5.25", 1.6" high, external, for optical</p><p>Bay 3: 3.5", 1" high, external, for media reader</p><p>Bay 4-6: 3.5", 1" high, internal, for hard drive</p><p>Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)</p><p>Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)</p><p>Slot 3: full-length, full-height, PCIe 3.0 x16**</p><p>Slot 4: full-length, full-height, 32-bit PCI 2.3</p><p>Slot 5: half-length, full-height, PCIe 2.0 x4</p><p>** Adapters >75W use auxiliary power connector(s) from PSU</p></div></div> <div>SECURITY<ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div> <div>ISV certifications<p>Please visit www.lenovo.com/support/ISV</p></div> <div>Environmental certifications<p>GREENGUARD® certified</p><p>RoHS-compliant</p><p>EPEAT™ Gold rating</p></div> <p>Supports ThinkVantage® technologies</p>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller		
Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Mixing of RDIMM and UDIMM is not supported		
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drives	3.5" SATA: 3.5" Hybrid: 2.5" SATA: 3.5" SAS/2.5" SAS: 2.5" SSD:	SATA 6.0Gb/s, 7200 rpm SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash SATA 6.0Gb/s, 10000 rpm SAS 6.0Gb/s, 15000 rpm Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

Type-model [†]	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4351-98U	E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in italics shows that this is a Global Model ** The SSD drives in italics must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset	
Intel AMT	Intel Active Management Technology 8 supported	
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller	
Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Mixing of RDIMM and UDIMM is not supported	
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology	
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support;• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support	
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support	
Discrete drive controller (opt)	None	
Hard drives	3.5" SATA:	SATA 6.0Gb/s, 7200 rpm
	3.5" Hybrid:	SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash
	2.5" SATA:	SATA 6.0Gb/s, 10000 rpm
	3.5" SAS/2.5" SAS:	SAS 6.0Gb/s, 15000 rpm
	2.5" SSD:	Solid State Drive (SSD), SATA 6.0Gb/s
		OPAL-capable on some models
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface	
Media reader (opt)	Optional media card reader on selected models	
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579	
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant	
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)	
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	

<div>Tower</div> <div><div>1 optical</div><div>2 optical</div><div>3 media</div><div>4 disk</div><div>5 disk</div><div>6 disk</div></div>	<ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 18.1"D x 18.8"H (with handle)• 175mm W x 460mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support
Bay 1-2: 5.25", 1.6" high, external, for optical	
Bay 3: 3.5", 1" high, external, for media reader	
Bay 4-6: 3.5", 1" high, internal, for hard drive	
Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)	
Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)	
Slot 3: full-length, full-height, PCIe 3.0 x16**	
Slot 4: full-length, full-height, 32-bit PCI 2.3	
Slot 5: half-length, full-height, PCIe 2.0 x4	
** Adapters >75W use auxiliary power connector(s) from PSU	

<div>SECURITY</div> <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)
<div>ISV certifications</div> <p>Please visit www.lenovo.com/support/ISV</p>
<div>Environmental certifications</div> <p>GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating</p>
Supports ThinkVantage® technologies

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4351-J6U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1600MHz UDIMM	4GBx2	No	No	1x1TB 3.5" SATA	DVD±RW	Media	1xQuadro K600 1GB/1xDVI-I DL/ 1xDP/41W	No	Switch	Win7 Pro64
4351-J7U	Xeon E5-1603 4C/2.8GHz/10MB/1066MHz	1600MHz UDIMM	4GBx2	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64
4351-L3U	Xeon E5-1607 v2 4C/3GHz/10MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4351-L4U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4351-L7U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 1GB/1xDVI-I DL/ 1xDP/41W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4351-L8U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4351-L9U	Xeon E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4351-M1U	Xeon E5-1620 v2 4C/3.7GHz/10MB/1866MHz	1866MHz UDIMM	4GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	No	1xQuadro K600 1GB/1xDVI-I DL/ 1xDP/41W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4351-M2U	Xeon E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	No	1xQuadro K5000 4GB/1xDVI-I DL/ 1xDVI-D DL/ 2xDP/122W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4351-M3U	Xeon E5-1650 v2 6C/3.5GHz/12MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	No	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

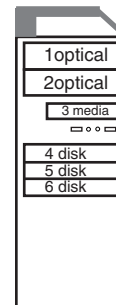
* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

• **3-year limited warranty**

• For ThinkStation S30 Platform Specifications, please see [ThinkStation S30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset	
Intel AMT	Intel Active Management Technology 8 supported	
Processor	One LGA2011 socket, integrated 4-channel DDR3 memory controller	
Memory	UDIMM or RDIMM, ECC, DDR3 , 4-channel capable, eight 240-pin DIMM sockets, 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)	
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Mixing of RDIMM and UDIMM is not supported 	
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology	
Onboard drive controllers	<ul style="list-style-type: none"> Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1 support; Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support 	
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support	
Discrete drive controller (opt)	None	
Hard drives	3.5" SATA:	SATA 6.0Gb/s, 7200 rpm
	3.5" Hybrid:	SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash
	2.5" SATA:	SATA 6.0Gb/s, 10000 rpm
	3.5" SAS/2.5" SAS:	SAS 6.0Gb/s, 15000 rpm
	2.5" SSD:	Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface	
Media reader (opt)	Optional media card reader on selected models	
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (opt)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579	
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant	
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)	
Power supply	610 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	
ISV certifications	Please visit www.lenovo.com/support/ISV	

Tower



- Raven black color; metal case
- 6.9"W x 18.1"D x 18.8"H (with handle)
- 175mm W x 460mm D x 478mm H
- 38.5 lb (17.5kg) max configuration
- 31-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1-2: 5.25", 1.6" high, external, for optical
 Bay 3: 3.5", 1" high, external, for media reader
 Bay 4-6: 3.5", 1" high, internal, for hard drive

Slot 1: full-length, full-height, PCIe 3.0 x16** (near CPU)
 Slot 2: full-length, full-height, PCIe 3.0 x16 (x4 electrical)
 Slot 3: full-length, full-height, PCIe 3.0 x16**
 Slot 4: full-length, full-height, 32-bit PCI 2.3
 Slot 5: half-length, full-height, PCIe 2.0 x4

** Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

Environmental certifications

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

Supports ThinkVantage® technologies

ThinkStation S30 Optional Configurations

Partial list of core options supported on ThinkStation S30

Memory	
2GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	43R2033
4GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	57Y4138
8GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	0A65718
4GB DDR3 1600 (PC3 12800) RDIMM Memory Workstation Memory	0A65732
8GB DDR3 1600 (PC3 12800) RDIMM Memory Workstation Memory	0A65733
Disk Drive	
Lenovo 500GB SATA HDD (7200)	43R1990
Lenovo 1TB SATA HDD (7200)	45J7918
ThinkStation 1TB 3.5" SATA Hybrid Hard Drive (7200)	4XB0F18665
ThinkStation 2TB 3.5" SATA Hybrid Hard Drive (7200)	4XB0F18666
ThinkStation 300GB 3.5" SAS Hard Drive (15K)	4XB0F18672
ThinkStation 450GB 3.5" SAS Hard Drive (15K)	43N3424
ThinkStation 600GB 3.5" SAS Hard Drive (15K)	4XB0F18673
ThinkStation 128GB SATA 2.5" Solid State Drive	4XB0F18670
ThinkStation 180GB Solid State Drive	0B47308
ThinkStation 256GB SATA 2.5" Solid State Drive	4XB0F18671
ThinkStation 256GB SATA 2.5" Solid State Drive - OPAL	4XB0F22432
Graphics	
NVIDIA NVS 300 512MB Dual DVI or Dual VGA Adapter	0B47390
NVIDIA NVS 310 512MB Dual DisplayPort Adapter	0B47074
NVIDIA NVS 510 2GB Quad Mini-DisplayPort Graphics Adapter	0B47077
NVIDIA Quadro 410 512MB Single DVI & Single DisplayPort Adapter	0B47075
NVIDIA Quadro K600 1GB Single DVI & Single DisplayPort Adapter	0B47394
NVIDIA Quadro K2000 2GB Single DVI & Dual DisplayPort Adapter	0B47392
NVIDIA Quadro K4000 3GB Single DVI & Dual DisplayPort Adapter	0B47393
NVIDIA Quadro K5000 4GB Dual DisplayPort & Dual DVI Graphics Adapter	0B47081

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkStation C30



Lenovo ThinkStation C30



Lenovo ThinkStation C30



Lenovo ThinkStation C30



Lenovo ThinkStation C30



Lenovo ThinkStation C30

ThinkStation C30 Platform Specifications - I of IV

Product Specifications Reference (PSREF)

Text in **red** shows that these features only apply to MT type 1095 and 1097 models, text in **green** shows that the features are supported on other models except MT type 1095 and 1097 models

Chipset	Intel C602 Chipset										
Intel AMT	MT type 1095 and 1097: Intel Active Management Technology 7 Others MT types: Intel Active Management Technology 8										
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 and Intel Xeon E5-2600 v2 family, or up to one processor from Intel Xeon E5-1600 v2 family, integrated 4-channel DDR3 memory controller per processor. Supports the following:										
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Intel QPI Speed	# of QPI Links	Max TDP	Memory Speed	Intel vPro technology
	Xeon E5-2603	4	4	1.8 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro
	Xeon E5-2609	4	4	2.4 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro
	Xeon E5-2620	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	60 W	1333MHz	vPro
	Xeon E5-2637	2	4	3 GHz	3.5 GHz	5 MB	8 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2640	6	12	2.5 GHz	3 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2650	8	16	2 GHz	2.8 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20 MB	8 GT/s	2	70 W	1600MHz	vPro
	Xeon E5-2660	8	16	2.2 GHz	3 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro
	Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro
	Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2690	8	16	2.9 GHz	3.8 GHz	20 MB	8 GT/s	2	135 W	1600MHz	vPro
	Xeon E5-1603	4	4	2.8 GHz		10 MB			130 W	1066MHz	vPro
	Xeon E5-2603 v2	4	4	1.8 GHz	1.8 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro
	Xeon E5-2609 v2	4	4	2.5 GHz	2.5 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro
	Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15 MB	7.2 GT/s	2	60 W	1600MHz	vPro
	Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2637 v2	4	8	3.5 GHz	3.8 GHz	15 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20 MB	7.2 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2643 v2	6	12	3.5 GHz	3.8 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25 MB	7.2 GT/s	2	70 W	1600MHz	vPro
	Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20 MB	8 GT/s	2	95 W	1866MHz	vPro
	Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25 MB	8 GT/s	2	95 W	1866MHz	vPro
	Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-1607 v2	4	4	3 GHz		10 MB			130 W	1600MHz	vPro
	Xeon E5-1620 v2	4	8	3.7 GHz	3.9 GHz	10 MB			130 W	1866MHz	vPro
	Xeon E5-1650 v2	6	12	3.5 GHz	3.9 GHz	12 MB			130 W	1866MHz	vPro
	Xeon E5-1660 v2	6	12	3.7 GHz	4 GHz	15 MB			130 W	1866MHz	vPro
Notes: 1. ThinkStation C30 support two processors. When ordering two processors, they must be the same 2. When using Intel Xeon E5-1600 and E5-1600 v2 series processors, max CPU configuration is 1 3. Intel Xeon processor numbering system is an alpha numeric representation of product line, product family and version. An 'L' suffix will be used to identify a low power processor. More details please see http://www.intel.com/products/processor_number 4. All information is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/products/family/59138/Intel-Xeon-Processor-E5-Family/server											

ThinkStation C30 Platform Specifications - II of IV

Product Specifications Reference (PSREF)

Text in **red** shows that these features only apply to MT type 1095 and 1097 models, text in **green** shows that the features are supported on other models except MT type 1095 and 1097 models

Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets (four DIMM sockets per processor), 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)						
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedMaximum memory capacity is also limited by operating systemWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)						
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology, supports the following NVIDIA Quadro, NVS graphics adapters and Tesla GPU computing processors:						
		Memory Size	CUDA Processor Cores	Display Connectors	Max. Displays	# of slots	Power
	NVIDIA Quadro and NVS Graphics						
	Quadro K6000	12GB	2880	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	225W
	Quadro K5000	4GB	1536	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	122W
	Quadro K4000	3GB	768	1 dual-link DVI-I 2 DisplayPort	4*	1	80W
	Quadro K2000	2GB	384	1 dual-link DVI-I 2 DisplayPort	4*	1	51W
	Quadro K2000D	2GB	384	1 dual-link DVI-I 1 dual-link DVI-D 1 mini DisplayPort	4*	1	51W
	Quadro K600	1GB	192	1 dual-link DVI-I 1 DisplayPort	2	1	41W
	Quadro 410	512MB	192	1 dual-link DVI-I 1 DisplayPort	2	1	37W
	Quadro 6000	6GB	448	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	2	204W
	Quadro 5000	2.5GB	352	1 dual-link DVI-I 2 DisplayPort, 1 Stereo	2	2	152W
	Quadro 4000	2GB	256	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	1	142W
	Quadro 2000	1GB	192	1 dual-link DVI-I 2 DisplayPort	2	1	62W
	Quadro 2000D	1GB	192	2 dual-link DVI-I	2	1	62W
	Quadro 600	1GB	96	1 dual-link DVI-I 1 DisplayPort	2	1	40W
	NVS 510	2048 MB	192	4 mini DisplayPort (with 4 mini DP to DP dongles)	4	1	35W
	NVS 315	1024MB	48	DMS59 to dual single-link DVI-I or dual DisplayPort	2	1	19.5W
	NVS 310	512 MB	48	2 DisplayPort	2	1	19.5W
	NVS 300	512 MB	16	DMS59 to dual single- link DVI-I	2	1	17.5W
	NVIDIA Tesla GPU Computing Processors (as part of NVIDIA Maximus Platform)						
	Tesla K20	5GB	2496				225W
	Tesla C2075	6GB	448				225W
	<i>* Quadro K4000, K2000, and K2000D are equipped with 3 onboard display connectors, 4 Displays require a supported DisplayPort 1.2 Multi-Stream capable hub or displays</i>						
	Notes:						
	1. ThinkStation supports NVIDIA SLI Technology with selected NVIDIA Quadro graphics adapters, additional SLI cable is needed. For the latest Quadro SLI certified list on ThinkStation, please see www.nvidia.com/object/quadro_sli_compatible_systems.html						
	2. ThinkStation C30 support NVIDIA Maximus technology. Maximus technology combines the visualization and interactive design capability of NVIDIA Quadro graphics and the high performance computing power of NVIDIA Tesla GPU computing processors in a single workstation. For more information on the latest Maximus certifications for ThinkStation and how to build Maximus system, please see www.nvidia.com/object/maximus.html						
3. CUDA Processor Cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.							

ThinkStation C30 Platform Specifications - III of IV Product Specifications Reference (PSREF)

Onboard drive controllers	<ul style="list-style-type: none"> • Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 support • Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support
Discrete drive controller (opt)	<i>One the following, depending on model:</i> LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support
Hard drive(s)	<i>Supports the following:</i> 3.5" SATA: SATA 6.0Gb/s, 7200 rpm, up to 4TB 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm, up to 1TB 3.5" SAS: SAS 6.0Gb/s, 15000 rpm, up to 600GB 2.5" SAS: SAS 6.0Gb/s, 15000 rpm, up to 300GB 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models, up to 300GB mSATA: mSATA Solid State Drive (SSD), SATA 6.0Gb/s, up to 128GB
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Drive Bays	One external 5.25" bays for opticals, three internal 3.5" bays for hard drives
Media reader (opt)	None (use USB port)
Front ports	<i>MT type 1095 and 1097:</i> Two USB 2.0, microphone (3.5mm), headphone (3.5mm) <i>Others MT types:</i> Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Security	<ul style="list-style-type: none"> • Security chip: <i>MT type 1095 and 1097:</i> Nuvoton NPCT421L for TPM function, TCG 1.2-compliant <i>Others MT types:</i> STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O enable/disable • USB 2.0 ports enable/disable individually • USB 3.0 ports enable/disable concurrently • Chassis intrusion switch (optional)
Mechanical	<ul style="list-style-type: none"> • Rack-mountable to 3U • Raven black color; metal case • 5.1"W x 17.5"D x 16.8"H • 130mm W x 444mm D x 427mm H (without rubber feet) • 40.7 lb (18.5kg) max configuration • 24-liter
Expansion slots	Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3 * Adapters >75W use auxiliary power connector(s) from PSU
Serviceability	<ul style="list-style-type: none"> • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit

ISV certifications	Please visit www.lenovo.com/support/ISV
Environmental certifications	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Warranty	1 or 3-year limited warranty, parts and labor
ThinkVantage®	Supports ThinkVantage® technologies
Preloaded operating systems	One the following, depending on model: <ul style="list-style-type: none"> • Windows® 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit
Preloaded applications (only some listed)	<p><i>For Windows 7 models:</i></p> <ul style="list-style-type: none"> • Rescue and Recovery® • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW model(s)) • Ulead® DVD MovieFactory® (DVD±RW model(s)) <p><i>For Windows 8 models:</i></p> <ul style="list-style-type: none"> • Evernote® • Norton Internet Security (30 days of virus definitions) • Norton Studio • Skype™ • Microsoft Office 2013 preloaded; purchase product key to activate • Cyberlink Power2Go (DVD±RW model(s)) • Cyberlink PowerProducer (DVD±RW model(s))

ThinkStation C30 (1137) - TopSeller (June 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adpтр	Chassis intrusion switch	Preloaded OS
1137-47U	1xE5-2603 (4C/1.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL*, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-48U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-49U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-51U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-52U	1xE5-2650 (8C/2GHz/20MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

1 Model in italics shows that this is a Global Model

2 The SSD drives in italics must be plugged into SATA AHCI connectors (red/orange)

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 1136/1137 and beyond, ThinkStation C30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 1095 and 1097MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- **For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications](#) sheet**

Chipset	Intel C602 Chipset	<div><div>1 optical</div><div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div></div>
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, 4-channel DDR3 memory controller per processor	
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)	
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supported	
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology	
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support	
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support	
Discrete drive controller (opt)	One the following, depending on model: LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models mSATA: mSATA SSD, SATA 6.0Gb/s	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface	
Media reader	None (use USB port)	
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579	
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	
Preloaded operating systems (OS)	One the following, depending on model: <ul style="list-style-type: none">Windows 7 Professional 64Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bitWindows 8 Pro 64-bit	

Tower

- Rack-mountable to 3U
- Raven black color; metal case
- 5.1"W x 17.5"D x 16.8"H
- 130mm W x 444mm D x 427mm H (without rubber feet)
- 40.7 lb (18.5kg) max configuration
- 24-liter
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1 5.25", 1.6" high, external, for optical
Bay 2-4 3.5", 1" high, internal, for hard drive

Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec)
Slot 2: full-length, full-height, PCIe 3.0 x16*
Slot 3: full-length, full-height, 32-bit PCI 2.3
Slot 4: full-length, full-height, PCIe 3.0 x16*
Slot 5: full-length, full-height, PCIe 2.0 x4
Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

Intel AMT

Intel Active Management Technology 8 supported

ISV certifications

Please visit www.lenovo.com/support/ISV

Environmental certifications

GREENGUARD® certified
RoHS-compliant
EPEAT™ Gold rating

Supports ThinkVantage® technologies

See footnotes for important warranty information
Model(s) announced June 18, 2013

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ThinkStation C30 (1137) - TopSeller (June 2013) - II

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-53U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-54U	1xE5-2603 (4C/1.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL*, 1xDP, 41W)	No	Switch	Win8 Pro64
1137-55U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
1137-56U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
1137-57U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64

2 The SSD drives in italics must be plugged into SATA AHCI connectors (red/orange)

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 1136/1137 and beyond, ThinkStation C30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 1095 and 1097MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- **For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications](#) sheet**

Chipset	Intel C602 Chipset	<div><div>1 optical</div><div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div></div>
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, 4-channel DDR3 memory controller per processor	
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)	
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supported	
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology	
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support	
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support	
Discrete drive controller (opt)	One the following, depending on model: LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models mSATA: mSATA SSD, SATA 6.0Gb/s	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface	
Media reader	None (use USB port)	
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579	
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	
Preloaded operating systems (OS)	One the following, depending on model: <ul style="list-style-type: none">Windows 7 Professional 64Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bitWindows 8 Pro 64-bit	

Tower
<ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit
Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive
Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3
* Adapters >75W use auxiliary power connector(s) from PSU
SECURITY
<ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)
Intel AMT
Intel Active Management Technology 8 supported
ISV certifications
Please visit www.lenovo.com/support/ISV
Environmental certifications
GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Supports ThinkVantage® technologies

See footnotes for important warranty information
Model(s) announced June 18, 2013

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ThinkStation C30 (1137) - TopSeller (June 2013) - III

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-58U	1xE5-2650 (8C/2GHz/20MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-59U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-81U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x180GB 2.5" SSD	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-82U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x180GB 2.5" SSD	DVD±RW	No	No	No	Switch	Win8 Pro64

1 *Model in italics shows that this is a Global Model*

2 The SSD drives in italics must be plugged into SATA AHCI connectors (red/orange)

- **3-year limited warranty**
- **With new MT type 1136/1137 and beyond, ThinkStation C30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 1095 and 1097MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- **For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications](#) sheet**

Chipset	Intel C602 Chipset
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, 4-channel DDR3 memory controller per processor
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over four DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology
Onboard drive controllers	<ul style="list-style-type: none"> Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 support Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support
Discrete drive controller (opt)	One the following, depending on model: LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models mSATA: mSATA SSD, SATA 6.0Gb/s
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Media reader	None (use USB port)
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579
Security chip	STMicroelectronics ST33TTPM12LPC, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none"> Windows 7 Professional 64 Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Windows 8 Pro 64-bit

1 optical

2 disk
3 disk
4 disk

Tower

- Rack-mountable to 3U
- Raven black color; metal case
- 5.1"W x 17.5"D x 16.8"H
- 130mm W x 444mm D x 427mm H (without rubber feet)
- 40.7 lb (18.5kg) max configuration
- 24-liter
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1 5.25", 1.6" high, external, for optical
 Bay 2-4 3.5", 1" high, internal, for hard drive

Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec)
 Slot 2: full-length, full-height, PCIe 3.0 x16*
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 3.0 x16*
 Slot 5: full-length, full-height, PCIe 2.0 x4
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

Intel AMT

Intel Active Management Technology 8 supported

ISV certifications

Please visit www.lenovo.com/support/ISV

Environmental certifications

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

Supports ThinkVantage® technologies

See footnotes for important warranty information
Model(s) announced June 18, 2013

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ThinkStation C30 (1137) - TopSeller (September 2013)

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-D5U	1xE5-2603 v2 (4C/1.8GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xNVS 315 (1GB, DMS59 to DVI-I SL, 19.5W)	No	Switch	Win8 Pro64
1137-D6U	1xE5-2603 v2 (4C/1.8GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
1137-D7U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-D8U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
1137-D9U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
1137-E1U	1xE5-2630 v2 (8C/2.6GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
1137-E2U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>1 optical</div> <div>2 disk</div> <div>3 disk</div> <div>4 disk</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over four DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• When using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 support• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s mSATA: OPAL-capable on some models mSATA SSD, SATA 6.0Gb/s		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Tower <ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H (without rubber feet)• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit <p>Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive</p> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3</p> <p>* Adapters >75W use auxiliary power connector(s) from PSU</p>			
SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)			
ISV certifications <p>Please visit www.lenovo.com/support/ISV</p>			
Environmental certifications <p>GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating</p> <p>Supports ThinkVantage® technologies</p>			

See footnotes for important warranty information
 Model(s) announced September 10, 2013

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ThinkStation C30 (1137) - TopSeller (September 2013) - II

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-E3U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-E4U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-E5U	1xE5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-E6U	1xE5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-E7U	1xE5-2603 v2 (4C/1.8GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xNVS 315 (1GB, DMS59 to DVI-I SL, 19.5W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-E8U	1xE5-2603 v2 (4C/1.8GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-E9U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-F1U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>1 optical</div><div>2 disk 3 disk 4 disk</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Tower <ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit <p>Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive</p> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3</p> <p>* Adapters >75W use auxiliary power connector(s) from PSU</p>			
SECURITY <ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)			
ISV certifications Please visit www.lenovo.com/support/ISV			
Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies			

See footnotes for important warranty information
Model(s) announced September 10, 2013

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ThinkStation C30 (1137) - TopSeller (September 2013) - III

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-F2U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-F3U	1xE5-2630 v2 (6C/2.6GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-F4U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-F5U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-F6U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-F7U	1xE5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-F8U	1xE5-1650 v2 (4C/3.7GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>1 optical</div><div>2 disk 3 disk 4 disk</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>OPAL-capable on some models</div> <div>mSATA: mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
<div>Tower<ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit</div> <div>Bay 1 5.25", 1.6" high, external, for optical</div> <div>Bay 2-4 3.5", 1" high, internal, for hard drive</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16*</div> <div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16*</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div> <div>* Adapters >75W use auxiliary power connector(s) from PSU</div>			
<div>SECURITY<ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)</div>			
<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>			
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div>			
Supports ThinkVantage® technologies			

See footnotes for important warranty information
 Model(s) announced September 10, 2013

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ThinkStation C30 (1137) - TopSeller (October 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-F9U	1xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1137-G1U	1xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-G2U	1xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win8 Pro64
1137-G3U	1xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>1 optical</div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s mSATA: OPAL-capable on some models mSATA SSD, SATA 6.0Gb/s		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Tower			
<ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit			
Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive			
Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3			
* Adapters >75W use auxiliary power connector(s) from PSU			
SECURITY			
<ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)			
ISV certifications			
Please visit www.lenovo.com/support/ISV			
Environmental certifications			
GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating			
Supports ThinkVantage® technologies			

See footnotes for important warranty information
 Model(s) announced October 15, 2013

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 (1137-7) November 2013

ThinkStation C30 (1137) - TopSeller (April 2014) - I

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-H2U	1xXeonE5-2603 v2 4C/1.8GHz/10MB/1333MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-H3U	1xXeonE5-2609 v2 4C/2.5GHz/10MB/1333MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-H4U	1xXeonE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-H5U	1xXeonE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	No	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-H6U	1xXeonE5-2630 v2 6C/2.6GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA(Hybrid)	DVD±RW	No	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-H7U	1xXeonE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA(Hybrid)	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-H8U	1xXeonE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model

** The SSD drives in *italics* must be plugged into red or orange SATA connectors

*** DL = Dual Link, SL = Single Link

- 3-year limited warranty

- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>1 optical</div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over four DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• When using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 support• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Tower <ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H (without rubber feet)• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3 * Adapters >75W use auxiliary power connector(s) from PSU			
SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)			
ISV certifications Please visit www.lenovo.com/support/ISV			
Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies			

See footnotes for important warranty information

Model(s) announced April 1, 2014

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ThinkStation C30 (1137) - TopSeller (April 2014) - II

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1137-H9U	1xXeonE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-J1U	1xXeonE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1137-J2U	2xXeonE5-2667 v2 8C/3.3GHz/25MB/1866MHz	1866MHz RDIMM	8GBx4	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model

** The SSD drives in *italics* must be plugged into red or orange SATA connectors

*** DL = Dual Link, SL = Single Link

• 3-year limited warranty

• For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications](#) sheet

Chipset	Intel C602 Chipset		<div><div>1 optical</div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div> <div>Tower<ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H (without rubber feet)• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit<div>Bay 1 5.25", 1.6" high, external, for optical</div><div>Bay 2-4 3.5", 1" high, internal, for hard drive</div><div>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16*</div><div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 4: full-length, full-height, PCIe 3.0 x16*</div><div>Slot 5: full-length, full-height, PCIe 2.0 x4</div><div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div><div>* Adapters >75W use auxiliary power connector(s) from PSU</div><div>SECURITY<ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)<div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div><div>Environmental certifications</div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div><div>Supports ThinkVantage® technologies</div></div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over four DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• When using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 support• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div><div>3.5" SATA:</div><div>3.5" Hybrid:</div><div>2.5" SATA:</div><div>3.5" SAS/2.5" SAS:</div><div>2.5" SSD:</div><div>mSATA:</div></div> <div><div>SATA 6.0Gb/s, 7200 rpm</div><div>SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div><div>SATA 6.0Gb/s, 10000 rpm</div><div>SAS 6.0Gb/s, 15000 rpm</div><div>Solid State Drive (SSD), SATA 6.0Gb/s</div><div>OPAL-capable on some models</div><div>mSATA SSD, SATA 6.0Gb/s</div></div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

See footnotes for important warranty information

Model(s) announced April 1, 2014

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(1137-9) April 2014

ThinkStation C30 (1136) - June 2013

Product Specifications Reference (PSREF)

Type-model¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s)²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adpтр	Chassis intrusion switch	Preloaded OS
1136-19U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL*, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-21U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-22U	1xE5-2630 (6C/2.3GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-23U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-24U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64

1 Model in italics shows that this is a Global Model

2 The SSD drives in italics must be plugged into SATA AHCI connectors (red/orange)

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 1136/1137 and beyond, ThinkStation C30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 1095 and 1097MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- **For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications](#) sheet**

Chipset	Intel C602 Chipset
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, 4-channel DDR3 memory controller per processor
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over four DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology
Onboard drive controllers	<ul style="list-style-type: none"> Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 support Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support
Discrete drive controller (opt)	One the following, depending on model: LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models mSATA: mSATA SSD, SATA 6.0Gb/s
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Media reader	None (use USB port)
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none"> Windows 7 Professional 64 Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Windows 8 Pro 64-bit

The diagram shows the front panel of the system unit. At the top left is the '1 optical' drive. Below it are four 'disk' drives labeled '2 disk', '3 disk', and '4 disk'. To the right of the disk drives is a vertical stack of icons representing various security and management features.

Tower <ul style="list-style-type: none"> Rack-mountable to 3U Raven black color; metal case 5.1"W x 17.5"D x 16.8"H 130mm W x 444mm D x 427mm H (without rubber feet) 40.7 lb (18.5kg) max configuration 24-liter Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support or optional rail kit 	Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3 <i>* Adapters >75W use auxiliary power connector(s) from PSU</i>
SECURITY <ul style="list-style-type: none"> Security chip (see information on left) Side cover lock (ships with two identical keys) Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O enable/disable USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch on selected model(s) 	
Intel AMT Intel Active Management Technology 8 supported	
ISV certifications Please visit www.lenovo.com/support/ISV	
Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating	
Supports ThinkVantage® technologies	

See footnotes for important warranty information
Model(s) announced June 18, 2013

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(AL11-4) June 2013

ThinkStation C30 (1136) - June 2013 - II

Product Specifications Reference (PSREF)

Type-model¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s)²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adpтр	Chassis intrusion switch	Preloaded OS
1136-25U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL*, 2xDP, 51W)	No	Switch	Win8 Pro64
1136-26U	1xE5-2630 (6C/2.3GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
1136-27U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64

2 The SSD drives in italics must be plugged into SATA AHCI connectors (red/orange)

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 1136/1137 and beyond, ThinkStation C30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 1095 and 1097MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- **For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications](#) sheet**

Chipset	Intel C602 Chipset	<div><div>1 optical</div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div>
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, 4-channel DDR3 memory controller per processor	
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)	
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supported	
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology	
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support	
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support	
Discrete drive controller (opt)	One the following, depending on model: LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5 support	
Hard drives	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models mSATA: mSATA SSD, SATA 6.0Gb/s	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface	
Media reader	None (use USB port)	
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579	
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	
Preloaded operating systems (OS)	One the following, depending on model: <ul style="list-style-type: none">Windows 7 Professional 64Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bitWindows 8 Pro 64-bit	
		Tower <ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit <p>Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive</p> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3</p> <p>* Adapters >75W use auxiliary power connector(s) from PSU</p>
		SECURITY <ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)
		Intel AMT <p>Intel Active Management Technology 8 supported</p>
		ISV certifications <p>Please visit www.lenovo.com/support/ISV</p>
		Environmental certifications <p>GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating</p>
		Supports ThinkVantage® technologies

See footnotes for important warranty information
Model(s) announced June 18, 2013

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(ALI2-4) June 2013

ThinkStation C30 (1136) - September 2013

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1136-A7U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-A8U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-A9U	1xE5-2630 v2 (6C/2.6GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-B1U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-B2U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-B3U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K5000 (4GB, 1xDVI-I DL, 1xDVI-D DL, 2xDP, 122W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
1136-B4U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>1 optical</div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Tower <ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit			
Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive			
Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3			
* Adapters >75W use auxiliary power connector(s) from PSU			
SECURITY <ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)			
ISV certifications Please visit www.lenovo.com/support/ISV			
Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating			
Supports ThinkVantage® technologies			

See footnotes for important warranty information
Model(s) announced September 10, 2013

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(1136-3) September 2013

ThinkStation C30 (1136) - September 2013 - II

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1136-B5U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
1136-B6U	1xE5-2630 v2 (6C/2.6GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
1136-B7U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	No	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
1136-B8U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	No	No	No	Switch	Win8 Pro64
1136-B9U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	No	1xQuadro K5000 (4GB, 1xDVI-I DL, 1xDVI-D DL, 2xDP, 122W)	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>1 optical</div> <div>2 disk</div> <div>3 disk</div> <div>4 disk</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory cacpacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Tower <ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit <p>Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive</p> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3</p> <p>* Adapters >75W use auxiliary power connector(s) from PSU</p>			
SECURITY <ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)			
ISV certifications Please visit www.lenovo.com/support/ISV			
Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating Supports ThinkVantage® technologies			

See footnotes for important warranty information
 Model(s) announced September 10, 2013

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 (1136-4) September 2013

Type-model ¹	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
<i>1136-C5U</i>	1xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz UDIMM	4GBx1	No	No	1x2TB 3.5" SATA	DVD±RW	No	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>1 optical</div><div>2 disk</div><div>3 disk</div><div>4 disk</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver four DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory capacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 supportThree SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support		
Discrete drive controller (opt)	None		
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader	None (use USB port)		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579		
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

Tower
<ul style="list-style-type: none">Rack-mountable to 3URaven black color; metal case5.1"W x 17.5"D x 16.8"H130mm W x 444mm D x 427mm H (without rubber feet)40.7 lb (18.5kg) max configuration24-literToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support or optional rail kit
Bay 1 5.25", 1.6" high, external, for optical
Bay 2-4 3.5", 1" high, internal, for hard drive
Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec)
Slot 2: full-length, full-height, PCIe 3.0 x16*
Slot 3: full-length, full-height, 32-bit PCI 2.3
Slot 4: full-length, full-height, PCIe 3.0 x16*
Slot 5: full-length, full-height, PCIe 2.0 x4
Slot 6: half-length, full-height, 32-bit PCI 2.3
* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY
<ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)
ISV certifications
Please visit www.lenovo.com/support/ISV
Environmental certifications
GREENGUARD® certified
RoHS-compliant
EPEAT™ Gold rating
Supports ThinkVantage® technologies

See footnotes for important warranty information

Model(s) announced October 8, 2013

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(1136-5) November 2013

ThinkStation C30 (1136) - April 2014

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
1136-D4U	2U Ueon E5-2667 v2 8C/3.3GHz/25MB/1866MHz	1866MHz UDIMM	4GBx4	No	No	1x500GB 3.5" SATA	DVD	No	1xNVS 510 2GB/4xminiDP/35W	No	Switch	Win7 Pro64
1136-D5U	2U Ueon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz UDIMM	4GBx4	No	No	1x2TB 3.5" SATA	DVD±RW	No	1xNVS 310 512MB/2xDP/19.5W	No	Switch	Win7 Pro64
1136-E8U	1U Ueon E5-2609 v2 4C/2.5GHz/10MB/1333MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA	DVD±RW	No	1xQuadro K600 1GB/1xDVI-I DL/ 1xDP/41W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1136-E9U	1U Ueon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA (Hybrid)	DVD±RW	No	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1136-F1U	1U Ueon E5-2630 v2 6C/2.6GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA (Hybrid)	DVD±RW	No	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1136-F2U	1U Ueon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	4GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	No	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1136-F3U	1U Ueon E5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD (OPAL)	DVD±RW	No	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
1136-F4U	1U Ueon E5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA (Hybrid)	DVD±RW	No	1xQuadro K5000 4GB/1xDVI-I DL/ 1xDVI-D DL/ 2xDP/122W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation C30 platform specifications, please see [ThinkStation C30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>1 optical</div> <div>2 disk</div> <div>3 disk</div> <div>4 disk</div>	Tower <ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H (without rubber feet)• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit
Intel AMT	Intel Active Management Technology 8 supported			
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		Bay 1 5.25", 1.6" high, external, for optical Bay 2-4 3.5", 1" high, internal, for hard drive	Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU, x4 elec) Slot 2: full-length, full-height, PCIe 3.0 x16* Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16* Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), eight 240-pin DIMM sockets 64GB max (UDIMM, 8GBx8)/256GB max (RDIMM, 32GBx8)			
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over four DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• When using processor from Xeon E5-1600 and E5-1600 v2 series, only four DIMM sockets for CPU1 are available and max memory cacpacity is 32GB (UDIMM, 8GBx4)/128GB (RDIMM, 32GBx4)		* Adapters >75W use auxiliary power connector(s) from PSU	SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology			
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5 support• Three SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5 support		ISV certifications Please visit www.lenovo.com/support/ISV	Environmental certifications GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Upgrade ROM for onboard drive controllers (opt)	Optional SAS HDD Enablement Module upgrades the 3 SATA connectors on SCU to 3 SATA/SAS connectors, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support			
Discrete drive controller (opt)	None		Supports ThinkVantage® technologies	
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s			
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface			
Media reader	None (use USB port)			
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, two USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)			
IEEE 1394 adptr (optional)	None. Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, two 6-pin ports on rear			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Onboard Ethernet	One onboard gigabit ethernet, Intel 82579			
Security chip	STMicroelectronics ST33TPM12LPC, TCG 1.2-compliant			
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)			
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified			

See footnotes for important warranty information

Model(s) announced April 1, 2014

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ThinkStation C30 Optional Configurations

Partial list of core options supported on ThinkStation C30

Processor (2nd processor and heat sink options)	
ThinkStation C30, D30 Processor Heat Sink	0A65721
ThinkStation CPU Xeon E5-2660	4XG0E76794
ThinkStation CPU Xeon E5-2650	4XG0E76795
ThinkStation CPU Xeon E5-2640	4XG0E76796
ThinkStation CPU Xeon E5-2630	4XG0E76797
ThinkStation CPU Xeon E5-2620	4XG0E76798
ThinkStation CPU Xeon E5-2609	4XG0E76799
ThinkStation CPU Xeon E5-2603	4XG0E76800
Memory	
2GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	43R2033
4GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	57Y4138
8GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	0A65718
4GB DDR3 1600 (PC3 12800) RDIMM Memory Workstation Memory	0A65732
8GB DDR3 1600 (PC3 12800) RDIMM Memory Workstation Memory	0A65733
Disk Drive	
Lenovo 500GB SATA HDD (7200)	43R1990
Lenovo 1TB SATA HDD (7200)	45J7918
ThinkStation 1TB 3.5" SATA Hybrid Hard Drive (7200)	4XB0F18665
ThinkStation 2TB 3.5" SATA Hybrid Hard Drive (7200)	4XB0F18666
ThinkStation 300GB 3.5" SAS Hard Drive (15K)	4XB0F18672
ThinkStation 450GB 3.5" SAS Hard Drive (15K)	43N3424
ThinkStation 600GB 3.5" SAS Hard Drive (15K)	4XB0F18673
ThinkStation 128GB SATA 2.5" Solid State Drive	4XB0F18670
ThinkStation 180GB Solid State Drive	0B47308
ThinkStation 256GB SATA 2.5" Solid State Drive	4XB0F18671
ThinkStation 256GB SATA 2.5" Solid State Drive - OPAL	4XB0F22432
Graphics	
NVIDIA NVS 300 512MB Dual DVI or Dual VGA Adapter	0B47390
NVIDIA NVS 310 512MB Dual DisplayPort Adapter	0B47074
NVIDIA NVS 510 2GB Quad Mini-DisplayPort Graphics Adapter	0B47077
NVIDIA Quadro 410 512MB Single DVI & Single DisplayPort Adapter	0B47075
NVIDIA Quadro K600 1GB Single DVI & Single DisplayPort Adapter	0B47394
NVIDIA Quadro K2000 2GB Single DVI & Dual DisplayPort Adapter	0B47392
NVIDIA Quadro K4000 3GB Single DVI & Dual DisplayPort Adapter	0B47393
NVIDIA Quadro K5000 4GB Dual DisplayPort & Dual DVI Graphics Adapter	0B47081
Others	
ThinkStation C-Series, D-Series Rail Kit	57Y4482

For more information on accessories:

www.lenovo.com/accessories

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www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkStation



Lenovo ThinkStation D30



Lenovo ThinkStation D30



Lenovo ThinkStation D30



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Lenovo ThinkStation D30

ThinkStation D30 Platform Specifications - I of IV

Product Specifications Reference (PSREF)

Text in **red** shows that these features only apply to MT type 4223 and 4229 models, text in **green** shows that the features are supported on other models except MT type 4223 and 4229 models

Chipset	Intel C602 Chipset										
Intel AMT	MT type 4223 and 4229: Intel Active Management Technology 7 Others MT types: Intel Active Management Technology 8										
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 and Intel Xeon E5-2600 v2 family, or up to one processor from Intel Xeon E5-1600 v2 family, integrated 4-channel DDR3 memory controller per processor. Supports the following:										
	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Intel QPI Speed	# of QPI Links	Max TDP	Memory Speed	Intel vPro technology
	Xeon E5-2603	4	4	1.8 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro
	Xeon E5-2609	4	4	2.4 GHz		10 MB	6.4 GT/s	2	80 W	1066MHz	vPro
	Xeon E5-2620	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15 MB	7.2 GT/s	2	60 W	1333MHz	vPro
	Xeon E5-2637	2	4	3 GHz	3.5 GHz	5 MB	8 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2640	6	12	2.5 GHz	3 GHz	15 MB	7.2 GT/s	2	95 W	1333MHz	vPro
	Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2650	8	16	2 GHz	2.8 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20 MB	8 GT/s	2	70 W	1600MHz	vPro
	Xeon E5-2660	8	16	2.2 GHz	3 GHz	20 MB	8 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro
	Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20 MB	8 GT/s	2	115 W	1600MHz	vPro
	Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20 MB	8 GT/s	2	130 W	1600MHz	vPro
	Xeon E5-2690	8	16	2.9 GHz	3.8 GHz	20 MB	8 GT/s	2	135 W	1600MHz	vPro
	Xeon E5-1603	4	4	2.8 GHz		10 MB			130 W	1066MHz	vPro
	Xeon E5-2603 v2	4	4	1.8 GHz	1.8 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro
	Xeon E5-2609 v2	4	4	2.5 GHz	2.5 GHz	10 MB	6.4 GT/s	2	80 W	1333MHz	vPro
	Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15 MB	7.2 GT/s	2	60 W	1600MHz	vPro
	Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15 MB	7.2 GT/s	2	80 W	1600MHz	vPro
	Xeon E5-2637 v2	4	8	3.5 GHz	3.8 GHz	15 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20 MB	7.2 GT/s	2	95 W	1600MHz	vPro
	Xeon E5-2643 v2	6	12	3.5 GHz	3.8 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25 MB	7.2 GT/s	2	70 W	1600MHz	vPro
	Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20 MB	8 GT/s	2	95 W	1866MHz	vPro
	Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25 MB	8 GT/s	2	95 W	1866MHz	vPro
	Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2687W v2	8	16	3.4 GHz	4 GHz	25 MB	8 GT/s	2	150 W	1866MHz	Yes
	Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30 MB	8 GT/s	2	115 W	1866MHz	vPro
	Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30 MB	8 GT/s	2	130 W	1866MHz	vPro
	Xeon E5-1607 v2	4	4	3 GHz		10 MB			130 W	1600MHz	vPro
	Xeon E5-1620 v2	4	8	3.7 GHz	3.9 GHz	10 MB			130 W	1866MHz	vPro
	Xeon E5-1650 v2	6	12	3.5 GHz	3.9 GHz	12 MB			130 W	1866MHz	vPro
	Xeon E5-1660 v2	6	12	3.7 GHz	4 GHz	15 MB			130 W	1866MHz	vPro
	Notes: 1. ThinkStation D30 support two processors. When ordering two processors, they must be the same 2. When using Intel Xeon E5-1600 and E5-1600 v2 series processors, max CPU configuration is 1 3. Intel Xeon processor numbering system is an alpha numeric representation of product line, product family and version. An 'L' suffix will be used to identify a low power processor. More details please see http://www.intel.com/products/processor_number 4. All information is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/products/family/59138/Intel-Xeon-Processor-E5-Family/server										

ThinkStation D30 Platform Specifications - II of IV

Product Specifications Reference (PSREF)

Text in **red** shows that these features only apply to MT type 4223 and 4229 models, text in **green** shows that the features are supported on other models except MT type 4223 and 4229 models

Memory	UDIMM or RDIMM, ECC, DDR3, sixteen 240-pin DIMM sockets (eight DIMM sockets per processor), 8-channel capable (4-channel per processor), 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)						
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver eight DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedMaximum memory capacity is also limited by operating systemWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)						
Graphics adapters and GPU computing	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology, supports the following NVIDIA Quadro, NVS graphics adapters and Tesla GPU computing processors						
		Memory Size	CUDA Processor Cores	Display Connectors	Max. Displays	# of slots	Power
	NVIDIA Quadro and NVS Graphics						
	Quadro K6000	12GB	2880	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	225W
	Quadro K5000	4GB	1536	1 dual-link DVI-I 1 dual-link DVI-D 2 DisplayPort	4	2	122W
	Quadro K4000	3GB	768	1 dual-link DVI-I 2 DisplayPort	4*	1	80W
	Quadro K2000	2GB	384	1 dual-link DVI-I 2 DisplayPort	4*	1	51W
	Quadro K2000D	2GB	384	1 dual-link DVI-I 1 dual-link DVI-D 1 mini DisplayPort	4*	1	51W
	Quadro K600	1GB	192	1 dual-link DVI-I 1 DisplayPort	2	1	41W
	Quadro 410	512MB	192	1 dual-link DVI-I 1 DisplayPort	2	1	37W
	Quadro 6000	6GB	448	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	2	204W
	Quadro 5000	2.5GB	352	1 dual-link DVI-I 2 DisplayPort, 1 Stereo	2	2	152W
	Quadro 4000	2GB	256	1 dual-link DVI-I 2 DisplayPort 1 Stereo	2	1	142W
	Quadro 2000	1GB	192	1 dual-link DVI-I 2 DisplayPort	2	1	62W
	Quadro 2000D	1GB	192	2 dual-link DVI-I	2	1	62W
	Quadro 600	1GB	96	1 dual-link DVI-I 1 DisplayPort	2	1	40W
	NVS 510	2048 MB	192	4 mini DisplayPort (with 4 mini DP to DP dongles)	4	1	35W
	NVS 315	1024MB	48	DMS59 to dual single-link DVI-I or dual DisplayPort	2	1	19.5W
	NVS 310	512 MB	48	2 DisplayPort	2	1	19.5W
	NVS 300	512 MB	16	DMS59 to dual single- link DVI-I	2	1	17.5W
	NVIDIA Tesla GPU Computing Processors (as part of NVIDIA Maximus Platform)						
	Tesla K20	5GB	2496				225W
	Tesla C2075	6GB	448				225W
	* Quadro K4000, K2000, and K2000D are equipped with 3 onboard display connectors, 4 Displays require a supported DisplayPort 1.2 Multi-Stream capable hub or displays						
	Notes:						
	1. ThinkStation supports NVIDIA SLI Technology with selected NVIDIA Quadro graphics adapters, additional SLI cable is needed. For the latest Quadro SLI certified list on ThinkStation, please see www.nvidia.com/object/quadro_sli_compatible_systems.html						
	2. ThinkStation D30 support NVIDIA Maximus technology. Maximus technology combines the visualization and interactive design capability of NVIDIA Quadro graphics and the high performance computing power of NVIDIA Tesla GPU computing processors in a single workstation. For more information on the latest Maximus certifications for ThinkStation and how to build Maximus system, please see www.nvidia.com/object/maximus.html						
3. CUDA Processor Cores cannot be compared between GPU generations due to several important architectural differences that exist between streaming multiprocessor designs.							

ThinkStation D30 Platform Specifications - III of IV

Product Specifications Reference (PSREF)

Onboard drive controllers	<ul style="list-style-type: none"> Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support Four SATA connectors via integrated Storage Controller Unit (SCU) in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support
Upgrade ROM for onboard drive controllers (optional)	<p>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</p> <ul style="list-style-type: none"> five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support
Discrete drive controller (optional)	<p>One the following, depending on model:</p> <p>LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support optional upgrade key for RAID 5 support</p> <p>LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support</p>
Hard drive(s)	<p>Supports the following:</p> <p>3.5" SATA: SATA 6.0Gb/s, 7200 rpm, up to 4TB 3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash 2.5" SATA: SATA 6.0Gb/s, 10000 rpm, up to 1TB 3.5" SAS: SAS 6.0Gb/s, 15000 rpm, up to 600GB 2.5" SAS: SAS 6.0Gb/s, 15000 rpm, up to 300GB 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s, OPAL-capable on selected models, up to 300GB mSATA: mSATA Solid State Drive (SSD), SATA 6.0Gb/s, up to 128GB</p>
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface
Drive Bays	Three external 5.25" bays for opticals, five internal 3.5" bays for drives
Media reader (opt)	Optional 29-in-1 media card reader on selected models
Front ports	<p>MT type 4223 and 4229: Two USB 2.0, microphone (3.5mm), headphone (3.5mm)</p> <p>Others MT types: Two USB 3.0, microphone (3.5mm), headphone (3.5mm)</p>
Rear ports	Eight USB 2.0, two USB 3.0 (blue ports), one serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
IEEE 1394 adptr (opt)	Optional FireWire PCIe adapter, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	Internal speaker for business audio
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
Security	<ul style="list-style-type: none"> Security chip: <ul style="list-style-type: none"> MT type 4223 and 4229: Nuvoton NPCT421L for TPM function, TCG 1.2-compliant Others MT types: STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant Side cover lock (ships with two identical keys) Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O enable/disable USB 2.0 ports enable/disable individually USB 3.0 ports enable/disable concurrently Chassis intrusion switch (optional)
Mechanical	<ul style="list-style-type: none"> Raven black color; metal case 8.3"W x 23.7"D x 19.1"H (with handle) 210mm W x 602mm D x 485mm H 60.6 lb (27.5kg) max confi guration 55-liter
Expansion slots	<p>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</p> <p>Slot 2: full-length, full-height, PCIe 3.0 x16* (for graphics adapter)</p> <p>Slot 3: full-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: full-length, full-height, PCIe 3.0 x16* (for graphics adapter)</p> <p>Slot 5: full-length, full-height, PCIe 2.0 x4</p> <p>Slot 6: half-length, full-height, 32-bit PCI 2.3</p> <p>* Adapters >75W use auxiliary power connector(s) from PSU</p>

Serviceability	<ul style="list-style-type: none"> • Removable handle on top front • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit
ISV certifications	Please visit www.lenovo.com/support/ISV
Environmental certifications	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Warranty	1 or 3-year limited warranty, parts and labor
ThinkVantage®	Supports ThinkVantage® technologies
Preloaded operating systems	<i>One the following, depending on model:</i> <ul style="list-style-type: none"> • Windows® 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit
Preloaded applications (only some listed)	<i>For Windows 7 models:</i> <ul style="list-style-type: none"> • Rescue and Recovery® • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW model(s)) • Ulead® DVD MovieFactory® (DVD±RW model(s)) <i>For Windows 8 models:</i> <ul style="list-style-type: none"> • Evernote® • Norton Internet Security (30 days of virus definitions) • Norton Studio • Skype™ • Microsoft Office 2013 preloaded; purchase product key to activate • Cyberlink Power2Go (DVD±RW model(s)) • Cyberlink PowerProducer (DVD±RW model(s))

ThinkStation D30 (4354) - TopSeller (June 2013)

Product Specifications Reference (PSREF)

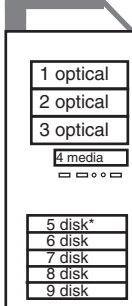
Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-38U	1xE5-2603 (4C/1.8GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL*, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-39U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-41U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-42U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-43U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)

¹ Model in *italics* shows that this is a Global Model

² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4353/4354 and beyond, ThinkStation D30 introduces new updates to improve the functionality and usability:**
 - (These new features are not supported on 4223 and 4229 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		Tower	
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, integrated 4-channel DDR3 memory controller per processor		 <ul style="list-style-type: none"> • Raven black color; metal case • 8.3"W x 23.7"D x 19.1"H (with handle) • 210mm W x 602mm D x 485mm H • 60.6 lb (27.5kg) max configuration • 55-liter • Removable handle on top front • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit 	
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		<p>Bay 1-3: 5.25", 1.6" high, external, for optical</p> <p>Bay 4: 3.5", 1" high, external, for media reader</p> <p>Bay 5-9: 3.5", 1" high, internal, for hard drive*</p>	
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Over eight DIMMs requires dual processors • Mixing of RDIMM and UDIMM is not supported • Maximum memory capacity is also limited by operating system 		<p>* Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed.</p>	
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		<p>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</p> <p>Slot 2: full-length, full-height, PCIe 3.0 x16**</p> <p>Slot 3: full-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: full-length, full-height, PCIe 3.0 x16**</p> <p>Slot 5: full-length, full-height, PCIe 2.0 x4</p> <p>Slot 6: half-length, full-height, 32-bit PCI 2.3</p>	
Onboard drive controllers	<ul style="list-style-type: none"> • Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support • Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support 		<p>** Adapters >75W use auxiliary power connector(s) from PSU</p>	
Upgrade ROM for onboard drive controllers (optional)	<p>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</p> <ul style="list-style-type: none"> • five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support • five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support 			
Discrete drive controller (optional)	<p>One the following, depending on model:</p> <p>LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support</p> <p>optional upgrade key for RAID 5 support</p> <p>LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support</p>			
Hard drive(s)	<p>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</p> <p>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</p> <p>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</p> <p>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</p> <p>OPAL-capable on some models</p> <p>mSATA: mSATA SSD, SATA 6.0Gb/s</p>			
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface			
Media reader (opt)	Optional media card reader on selected models			
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, two USB 3.0 (blue), two USB (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)			
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574			
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified			
Preloaded operating systems (OS)	<p>One the following, depending on model:</p> <ul style="list-style-type: none"> • Windows 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit 		<p>SECURITY</p> <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) • Power-on/Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O enable/disable • USB 2.0 ports enable/disable individually • USB 3.0 ports enable/disable concurrently • Chassis intrusion switch on selected model(s) <p>Intel AMT</p> <p>Intel Active Management Technology 8 supported</p> <p>ISV certifications</p> <p>Please visit www.lenovo.com/support/ISV</p> <p>Environmental certifications</p> <p>GREENGUARD® certified</p> <p>RoHS-compliant</p> <p>EPEAT™ Gold rating</p> <p>Supports ThinkVantage® technologies</p>	

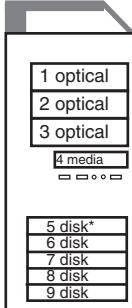
See footnotes for important warranty information
Model(s) announced June 18, 2013

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(HOL1-3) June 2013

Product Specifications Reference (PSREF)

1 Model in *italics* shows that this is a Global Model
2 The SSD drives in *italics* must be plugged into red or orange SATA connectors

- | | |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chipset | Intel C602 Chipset |
| Processor | Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, integrated 4-channel DDR3 memory controller per processor |
| Memory | UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16) |
| Additional memory disclaimers | <ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over eight DIMMs requires dual processors Mixing of RDIMM and UDIMM is not supported Maximum memory capacity is also limited by operating system |
| Graphics | Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology |
| Onboard drive controllers | <ul style="list-style-type: none"> Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support |
| Upgrade ROM for onboard drive controllers (optional) | <p>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</p> <ul style="list-style-type: none"> five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support |
| Discrete drive controller (optional) | <p>One the following, depending on model:</p> <p>LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support
optional upgrade key for RAID 5 support</p> <p>LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support</p> |
| Hard drive(s) | <p>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</p> <p>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</p> <p>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</p> <p>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</p> <p>mSATA: OPAL-capable on some models
mSATA SSD, SATA 6.0Gb/s</p> |
| Optical | Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface |
| Media reader (opt) | Optional media card reader on selected models |
| Front ports | Two USB 3.0, microphone (3.5mm), headphone (3.5mm) |
| Rear ports | Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) |
| IEEE 1394 adptr (optional) | Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front |
| Audio | High Definition (HD) Audio, Realtek® ALC662 codec |
| Speaker | Internal speaker for business audio |
| Onboard Ethernet | Dual onboard gigabit ethernet, Intel 82579 and 82574 |
| Security chip | STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant |
| Keyboard | Preferred Pro USB Keyboard (USB connector), 104-key, black |
| Mouse | Optical Wheel Mouse (USB connector), black |
| Power supply | 1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified |
| Preloaded operating systems (OS) | <p>One the following, depending on model:</p> <ul style="list-style-type: none"> Windows 7 Professional 64 Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit Windows 8 Pro 64-bit |
- ### Tower


 - Raven black color; metal case
 - 8.3"W x 23.7"D x 19.1"H (with handle)
 - 210mm W x 602mm D x 485mm H
 - 60.6 lb (27.5kg) max configuration
 - 55-liter
 - Removable handle on top front
 - Toolless side cover removal
 - Toolless disk and optical drive removal
 - Toolless adapter retention
 - Illuminated front icons
 - Rack shelf support or optional rail kit

Bay 1-3: 5.25", 1.6" high, external, for optical
 Bay 4: 3.5", 1" high, external, for media reader
 Bay 5-9: 3.5", 1" high, internal, for hard drive*

* Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed.

Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)
 Slot 2: full-length, full-height, PCIe 3.0 x16**
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 3.0 x16**
 Slot 5: full-length, full-height, PCIe 2.0 x4
 Slot 6: half-length, full-height, 32-bit PCI 2.3

** Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

 - Security chip (see information on left)
 - Side cover lock (ships with two identical keys)
 - Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
 - Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
 - Power-on/Administrator password
 - Boot sequence control
 - Boot without keyboard, mouse, diskette
 - Serial port I/O enable/disable
 - USB 2.0 ports enable/disable individually
 - USB 3.0 ports enable/disable concurrently
 - Chassis intrusion switch on selected model(s)

Intel AMT

Intel Active Management Technology 8 supported

ISV certifications

Please visit www.lenovo.com/support/ISV

Environmental certifications

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

Supports ThinkVantage® technologies

ThinkStation D30 (4354) - TopSeller (June 2013) - III

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-48U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL*, 2xDP, 51W)	No	Switch	Win8 Pro64
4354-49U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
4354-51U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4354-52U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	29-in-1	No	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model

² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4353/4354 and beyond, ThinkStation D30 introduces new updates to improve the functionality and usability:**
 - (These new features are not supported on 4223 and 4229 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- **For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)**

Chipset	Intel C602 Chipset	
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, integrated 4-channel DDR3 memory controller per processor	
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system	
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology	
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support	
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support	
Discrete drive controller (optional)	<i>One the following, depending on model:</i> LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support	
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s	
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface	
Media reader (opt)	Optional media card reader on selected models	
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574	
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none">• Windows 7 Professional 64• Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit• Windows 8 Pro 64-bit	

<div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div><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See footnotes for important warranty information

Model(s) announced June 18, 2013

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(HOL3-3) June 2013

ThinkStation D30 (4354) - TopSeller (June 2013) - IV

Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-53U	1xE5-2650 (8C/2GHz/20MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	No	No	Switch	Win8 Pro64
4354-73U	1xE5-2650 (8C/2GHz/20MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x180GB 2.5" SSD	DVD±RW	29-in-1	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-74U	1xE5-2650 (8C/2GHz/20MB/1600)	1600MHz UDIMM	4GBx1	No	No	No	1x180GB 2.5" SSD	DVD±RW	29-in-1	No	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model

² The SSD drives in *italics* must be plugged into red or orange SATA connectors

- **3-year limited warranty**
- **With new MT type 4353/4354 and beyond, ThinkStation D30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 4223 and 4229 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div><div><div></div><div></div><div></div><div></div></div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div><div>Bay 1-3: 5.25", 1.6" high, external, for optical</div><div>Bay 4: 3.5", 1" high, external, for media reader</div><div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div><div>* Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed.</div><div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 5: full-length, full-height, PCIe 2.0 x4</div><div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div></div>
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, integrated 4-channel DDR3 memory controller per processor		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver eight DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedMaximum memory capacity is also limited by operating system		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 supportFour SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 supportfive SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (optional)	<i>One the following, depending on model:</i> LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>OPAL-capable on some models</div> <div>mSATA: mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional 29-in-1 media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black		
Mouse	Optical Wheel Mouse (USB connector), black		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Preloaded operating systems (OS)	<i>One the following, depending on model:</i> <ul style="list-style-type: none">Windows 7 Professional 64Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bitWindows 8 Pro 64-bit		

<div><div>SECURITY</div><div><ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on/Administrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)</div></div>
<div><div>Intel AMT</div><div>Intel Active Management Technology 8 supported</div></div>
<div><div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div></div>
<div><div>Environmental certifications</div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div>
Supports ThinkVantage® technologies

See footnotes for important warranty information
 Model(s) announced June 18, 2013

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ThinkStation D30 (4354) - TopSeller (September 2013)

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-C6U	1xE5-2603 v2 (4C/1.8GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-C7U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-C8U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-C9U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-D1U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-D2U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-D3U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz RDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
			<div>Bay 1-3: 5.25", 1.6" high, external, for optical</div> <div>Bay 4: 3.5", 1" high, external, for media reader</div> <div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div> <div>** Adapters >75W use auxiliary power connector(s) from PSU</div>
			<div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div>
			<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>
			<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>Supports ThinkVantage® technologies</div>

See footnotes for important warranty information
Model(s) announced September 10, 2013

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ThinkStation D30 (4354) - TopSeller (September 2013) - II

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adpтр	Chassis intrusion switch	Preloaded OS
4354-D4U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz RDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-D5U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz RDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-D6U	1xE5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-D7U	1xE5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-D8U	1xE5-2603 v2 (4C/1.8GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
4354-D9U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
4354-E1U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div></div>	
Intel AMT	Intel Active Management Technology 8 supported			
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported			
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)			
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)			
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology			
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support			
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support			
Discrete drive controller (opt)	None			
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>			
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface			
Media reader (opt)	Optional media card reader on selected models			
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)			
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574			
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant			
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)			
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified			
				<div>SECURITY</div> <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)
				<div>ISV certifications</div> Please visit www.lenovo.com/support/ISV
				<div>Environmental certifications</div> GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
			Supports ThinkVantage® technologies	

See footnotes for important warranty information
Model(s) announced September 10, 2013

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(4354-6) September 2013

ThinkStation D30 (4354) - TopSeller (September 2013) - III

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adpтр	Chassis intrusion switch	Preloaded OS
4354-E2U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
4354-E3U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4354-E4U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-E5U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz RDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4354-E6U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz RDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-E7U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz RDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-E8U	1xE5-1620 v2 (4C/3.7GHz/10MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-E9U	1xE5-1650 v2 (6C/3.5GHz/12MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>Tower</div> <div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
<div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div>			
<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>			
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>Supports ThinkVantage® technologies</div>			

See footnotes for important warranty information
Model(s) announced September 10, 2013

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ThinkStation D30 (4354) - TopSeller (October 2013)

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-F1U	2xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz RDIMM	8GBx2	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-F2U	2xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz RDIMM	8GBx2	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-F3U	2xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-F4U	2xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-F5U	2xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-F6U	2xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-F7U	2xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-F8U	2xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>Tower</div> <div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div><div></div><div></div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
<div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div>			
<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>			
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>Supports ThinkVantage® technologies</div>			

See footnotes for important warranty information
Model(s) announced October 15, 2013

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(4354-8) November 2013

ThinkStation D30 (4354) - TopSeller (October 2013) - II

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-F9U	2xE5-2637 v2 4C/3.5GHz/15MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-G1U	2xE5-2637 v2 4C/3.5GHz/15MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4354-G2U	2xE5-2643 v2 6C/3.5GHz/25MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4354-G3U	2xE5-2643 v2 6C/3.5GHz/25MB/1866MHz	1600MHz RDIMM	8GBx2	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>Tower</div> <div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

<div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div>
<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>Supports ThinkVantage® technologies</div>

See footnotes for important warranty information
Model(s) announced October 15, 2013

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ThinkStation D30 (4354) - TopSeller (April 2014)

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-H1U	1xXeon E5-2603 v2 4C/1.8GHz/10MB/1333MHz	1866MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-H2U	1xXeon E5-2609 v2 4C/2.5GHz/10MB/1333MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	Media	1xQuadro K600 1GB/1xDVI-I DL/ 1xDP/41W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-H3U	1xXeon E5-2609 v2 4C/2.5GHz/10MB/1333MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-H4U	1xXeon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA(Hybrid)	DVD±RW	Media	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-H5U	1xXeon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-H6U	1xXeon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-H7U	1xXeon E5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz RDIMM	8GBx1	No	No	1x2TB 3.5" SATA(Hybrid)	DVD±RW	Media	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>Tower</div> <div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>OPAL-capable on some models</div> <div>mSATA: mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

<div>Bay 1-3: 5.25", 1.6" high, external, for optical</div> <div>Bay 4: 3.5", 1" high, external, for media reader</div> <div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div>		
<div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 3: full-length, full-height, PCIe 3.0 x16, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div>		
** Adapters >75W use auxiliary power connector(s) from PSU		
<div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div>		
<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>		
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>Supports ThinkVantage® technologies</div>		

See footnotes for important warranty information
Model(s) announced April 1, 2014

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ThinkStation D30 (4354) - TopSeller (April 2014) - II

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4354-H8U	1xXeon E5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz RDIMM	8GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-H9U	1xXeon E5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz RDIMM	8GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4354-J1U	2xXeon E5-2690 v2 10C/3GHz/25MB/1866MHz	1866MHz RDIMM	8GBx8	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	Media	1xQuadro K5000 4GB/1xDVI-I DL/ 1xDVI-D DL/ 2xDP/122W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div><div>Bay 1-3: 5.25", 1.6" high, external, for optical</div><div>Bay 4: 3.5", 1" high, external, for media reader</div><div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div><div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 5: full-length, full-height, PCIe 2.0 x4</div><div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div><div><div>SECURITY</div><div><div><div><div><div>• Security chip (see information on left)</div><div>• Side cover lock (ships with two identical keys)</div><div>• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)</div><div>• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)</div><div>• Power-on/Administrator password</div><div>• Boot sequence control</div><div>• Boot without keyboard, mouse, diskette</div><div>• Serial port I/O enable/disable</div><div>• USB 2.0 ports enable/disable individually</div><div>• USB 3.0 ports enable/disable concurrently</div><div>• Chassis intrusion switch on selected model(s)</div></div></div><div><div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div></div><div><div>Environmental certifications</div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div><div>Supports ThinkVantage® technologies</div></div></div></div></div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

See footnotes for important warranty information
Model(s) announced April 1, 2014

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(4354-11) April 2014

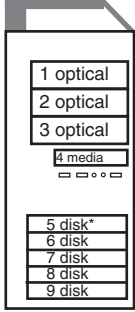
Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4353-23U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL*, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-24U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-25U	1xE5-2630 (6C/2.3GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-26U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-27U	1xE5-2609 (4C/2.4GHz/10MB/1066)	1600MHz UDIMM	4GBx1	No	No	No	1x500GB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model

² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4353/4354 and beyond, ThinkStation D30 introduces new updates to improve the functionality and usability:**
 - (These new features are not supported on 4223 and 4229 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		Tower	
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, integrated 4-channel DDR3 memory controller per processor		 <ul style="list-style-type: none"> • Raven black color; metal case • 8.3"W x 23.7"D x 19.1"H (with handle) • 210mm W x 602mm D x 485mm H • 60.6 lb (27.5kg) max configuration • 55-liter • Removable handle on top front • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit 	
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		Bay 1-3: 5.25", 1.6" high, external, for optical Bay 4: 3.5", 1" high, external, for media reader Bay 5-9: 3.5", 1" high, internal, for hard drive*	
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs • Over eight DIMMs requires dual processors • Mixing of RDIMM and UDIMM is not supported • Maximum memory capacity is also limited by operating system 		* Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed.	
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU) Slot 2: full-length, full-height, PCIe 3.0 x16** Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 3.0 x16** Slot 5: full-length, full-height, PCIe 2.0 x4 Slot 6: half-length, full-height, 32-bit PCI 2.3	
Onboard drive controllers	<ul style="list-style-type: none"> • Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support • Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support 		** Adapters >75W use auxiliary power connector(s) from PSU	
Upgrade ROM for onboard drive controllers (optional)	One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to: <ul style="list-style-type: none"> • five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support • five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support 			
Discrete drive controller (optional)	One the following, depending on model: LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support			
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s			
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface			
Media reader (opt)	Optional 29-in-1 media card reader on selected models			
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)			
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574			
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified			
Preloaded operating systems (OS)	One the following, depending on model: <ul style="list-style-type: none"> • Windows 7 Professional 64 • Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit • Windows 8 Pro 64-bit 			

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Product Specifications Reference (PSREF)

Type-model ¹	Processor(s)	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Discrete drive controller	Pre-conf RAID	Hard drive(s) ²	Optical	Media reader	Graphics adapter(s) and GPU computing	1394 adptr	Chassis intrusion switch	Preloaded OS
4353-28U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL*, 2xDP, 51W)	No	Switch	Win8 Pro64
4353-29U	1xE5-2630 (6C/2.3GHz/15MB/1333)	1600MHz UDIMM	4GBx1	No	No	No	1x1TB 3.5" SATA	DVD±RW	29-in-1	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4353-31U	1xE5-2620 (6C/2GHz/15MB/1333)	1600MHz UDIMM	4GBx1	SAS	No	No	1x300GB 3.5" SAS	DVD±RW	29-in-1	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64

¹ Model in *italics* shows that this is a Global Model

² The SSD drives in *italics* must be plugged into red or orange SATA connectors

* DL = Dual Link, SL = Single Link

- **3-year limited warranty**
- **With new MT type 4353/4354 and beyond, ThinkStation D30 introduces new updates to improve the functionality and usability:**
(These new features are not supported on 4223 and 4229 MT models)
 - Intel AMT: upgrades to Intel AMT 8 from Intel AMT 7
 - New TPM chip: STMicroelectronics ST33TPM12LPC
 - Two front USB 2.0 ports upgrade to USB3.0
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div>Bay 1-3: 5.25", 1.6" high, external, for optical</div> <div>Bay 4: 3.5", 1" high, external, for media reader</div> <div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div> <div>* Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed.</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div> <div>** Adapters >75W use auxiliary power connector(s) from PSU</div>	
Processor	Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 family, integrated 4-channel DDR3 memory controller per processor			
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)			
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver eight DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedMaximum memory capacity is also limited by operating system			
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology			
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 supportFour SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support			
Upgrade ROM for onboard drive controllers (optional)	One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to: <ul style="list-style-type: none">five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 supportfive SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support			
Discrete drive controller (optional)	One the following, depending on model: LSI SAS 9240-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support optional upgrade key for RAID 5 support LSI SAS 9260-8i: SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 10 support			
Hard drive(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 2.5" SATA: SATA 6.0Gb/s, 10000 rpm 3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm 2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s OPAL-capable on some models mSATA: mSATA SSD, SATA 6.0Gb/s			
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface			
Media reader (opt)	Optional 29-in-1 media card reader on selected models			
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)			
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574			
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified			
Preloaded operating systems (OS)	One the following, depending on model: <ul style="list-style-type: none">Windows 7 Professional 64Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bitWindows 8 Pro 64-bit			

Tower	
<div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div>Bay 1-3: 5.25", 1.6" high, external, for optical</div> <div>Bay 4: 3.5", 1" high, external, for media reader</div> <div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div> <div>* Bay 5 is available on models with the SATA or SAS Hard Disk Drive enablement module installed.</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div> <div>** Adapters >75W use auxiliary power connector(s) from PSU</div>	
SECURITY	
<ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on/Administrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)	
Intel AMT	
Intel Active Management Technology 8 supported	
ISV certifications	
Please visit www.lenovo.com/support/ISV	
Environmental certifications	
GREENGUARD® certified	
RoHS-compliant	
EPEAT™ Gold rating	
Supports ThinkVantage® technologies	

See footnotes for important warranty information
Model(s) announced June 18, 2013

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Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4353-C1U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-C2U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-C3U	1xE5-2630 v2 (6C/2.6GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-C4U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-C5U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-C6U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)
4353-C7U	1xE5-2680 v2 (10C/2.8GHz/25MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div><div><div>Bay 1-3: 5.25", 1.6" high, external, for optical</div><div>Bay 4: 3.5", 1" high, external, for media reader</div><div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div></div><div><div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 5: full-length, full-height, PCIe 2.0 x4</div><div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div></div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver eight DIMMs requires dual processorsMixing of RDIMM and UDIMM is not supportedMaximum memory capacity is also limited by operating systemWhen using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 supportFour SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 supportfive SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
<div><div>SECURITY</div><div><ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)Power-on/Administrator passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O enable/disableUSB 2.0 ports enable/disable individuallyUSB 3.0 ports enable/disable concurrentlyChassis intrusion switch on selected model(s)</div></div>			
<div><div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div></div>			
<div><div>Environmental certifications</div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div><div>Supports ThinkVantage® technologies</div></div>			

See footnotes for important warranty information
Model(s) announced September 10, 2013

ThinkStation D30 (4353) - September 2013 - II

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4353-C8U	1xE5-2609 v2 (4C/2.5GHz/10MB/1333)	1600MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 (1GB, 1xDVI-I DL, 1xDP, 41W)	No	Switch	Win8 Pro64
4353-C9U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
4353-D1U	1xE5-2630 v2 (6C/2.6GHz/15MB/1600)	1600MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA Hybrid	DVD±RW	Media	1xQuadro K4000 (3GB, 1xDVI-I DL, 2xDP, 80W)	No	Switch	Win8 Pro64
4353-D2U	1xE5-2620 v2 (6C/2.1GHz/15MB/1600)	1600MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	1xQuadro K2000 (2GB, 1xDVI-I DL, 2xDP, 51W)	No	Switch	Win8 Pro64
4353-D3U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA Hybrid	DVD±RW	Media	No	No	Switch	Win8 Pro64
4353-D4U	1xE5-2650 v2 (8C/2.6GHz/20MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64
4353-D5U	1xE5-2680 v2 (10C/2.8GHz/25MB/1866)	1600MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD - OPAL	DVD±RW	Media	No	No	Switch	Win8 Pro64

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

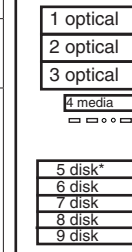
Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

<div>Bay 1-3: 5.25", 1.6" high, external, for optical</div> <div>Bay 4: 3.5", 1" high, external, for media reader</div> <div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div>			
<div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div>			
** Adapters >75W use auxiliary power connector(s) from PSU			

<div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div>	
<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>	
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div>	
Supports ThinkVantage® technologies	

See footnotes for important warranty information
Model(s) announced September 10, 2013

Tower



Bay 1-3: 5.25", 1.6" high, external, for optical
Bay 4: 3.5", 1" high, external, for media reader
Bay 5-9: 3.5", 1" high, internal, for hard drive*

Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)
Slot 2: full-length, full-height, PCIe 3.0 x16**
Slot 3: full-length, full-height, 32-bit PCI 2.3
Slot 4: full-length, full-height, PCIe 3.0 x16**
Slot 5: full-length, full-height, PCIe 2.0 x4
Slot 6: half-length, full-height, 32-bit PCI 2.3

** Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on/Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O enable/disable
- USB 2.0 ports enable/disable individually
- USB 3.0 ports enable/disable concurrently
- Chassis intrusion switch on selected model(s)

ISV certifications

Please visit www.lenovo.com/support/ISV

Environmental certifications

GREENGUARD® certified
RoHS-compliant
EPEAT™ Gold rating

Supports ThinkVantage® technologies

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4353-E3U	1xE5-2640 v2 8C/2GHz/20MB/1600MHz	1600MHz RDIMM	4GBx2	No	No	1x2TB 3.5" SATA	DVD±RW	Media	No	No	Switch	Win7 Pro64 (Downgrade from Win8)

* Model in *italics* shows that this is a Global Model** The SSD drives in *italics* must be plugged into red or orange SATA connectors

*** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div><div>Tower</div><div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div></div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to: <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>OPAL-capable on some models</div> <div>mSATA: mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
<div><div><div>Bay 1-3: 5.25", 1.6" high, external, for optical</div><div>Bay 4: 3.5", 1" high, external, for media reader</div><div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div></div><div><div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div><div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div><div>Slot 5: full-length, full-height, PCIe 2.0 x4</div><div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div></div><div>** Adapters >75W use auxiliary power connector(s) from PSU</div></div>			
<div><div>SECURITY</div><div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div></div>			
<div><div>ISV certifications</div><div>Please visit www.lenovo.com/support/ISV</div></div>			
<div><div>Environmental certifications</div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div><div>Supports ThinkVantage® technologies</div></div>			

See footnotes for important warranty information
 Model(s) announced October 8, 2013

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4353-G4U	2xXeon E5-2670 v2 10C/2.5GHz/25MB/1866MHz	1866MHz UDIMM	4GBx4	SAS	No	1TB 3.5" SATA +300GB 2.5" SAS	DVD±RW	Media	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64
4353-G5U	2xXeon E5-2643 v2 6C/3.5GHz/25MB/1866MHz	1866MHz UDIMM	4GBx4	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64
4353-J8U	1xXeon E5-2609 v2 4C/2.5GHz/10MB/1333MHz	1866MHz UDIMM	4GBx1	No	No	1x500GB 3.5" SATA	DVD±RW	Media	1xQuadro K600 1GB/1xDVI-I DL/ 1xDP/41W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4353-J9U	1xXeon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	Media	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4353-K1U	1xXeon E5-2630 v2 6C/2.6GHz/15MB/1600MHz	1866MHz UDIMM	4GBx1	No	No	1x1TB 3.5" SATA(Hybrid)	DVD±RW	Media	1xQuadro K4000 3GB/1xDVI-I DL/ 2xDP/80W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4353-K2U	1xXeon E5-2620 v2 6C/2.1GHz/15MB/1600MHz	1866MHz UDIMM	8GBx1	SAS	No	1x300GB 3.5" SAS	DVD±RW	Media	1xQuadro K2000 2GB/1xDVI-I DL/ 2xDP/51W	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4353-K3U	1xXeon E5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x2TB 3.5" SATA(Hybrid)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>Tower</div> <div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3, 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>OPAL-capable on some models</div> <div>mSATA: mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

<div>Bay 1-3: 5.25", 1.6" high, external, for optical</div> <div>Bay 4: 3.5", 1" high, external, for media reader</div> <div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div>			
<div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 3: full-length, full-height, PCIe 3.0 x16, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div>			
** Adapters >75W use auxiliary power connector(s) from PSU			

SECURITY	
<ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)	

ISV certifications	
Please visit www.lenovo.com/support/ISV	

Environmental certifications	
GREENGUARD® certified	
RoHS-compliant	
EPEAT™ Gold rating	
Supports ThinkVantage® technologies	

See footnotes for important warranty information
 Model(s) announced April 1, 2014

ThinkStation D30 (4353) - April 2014 - II

Product Specifications Reference (PSREF)

Type-model*	Processor(s) - Xeon E5 Family	Memory (MHz/type)	Memory DIMMs	Upgrade ROM for onboard drive controller	Pre-conf RAID	Hard drive(s)**	Optical	29-in-1 Media reader	Graphics adapter(s) and GPU computing***	1394 adptr	Chassis intrusion switch	Preloaded OS
4353-K4U	1xXeon E5-2650 v2 8C/2.6GHz/20MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)
4353-K5U	1xXeon E5-2680 v2 10C/2.8GHz/25MB/1866MHz	1866MHz UDIMM	8GBx1	No	No	1x256GB 2.5" SSD(OPAL)	DVD±RW	Media	Open	No	Switch	Win7 Pro64 (Downgrade from Win8.1)

* Model in *italics* shows that this is a Global Model ** The SSD drives in *italics* must be plugged into red or orange SATA connectors *** DL = Dual Link, SL = Single Link

- 3-year limited warranty
- For ThinkStation D30 platform specifications, please see [ThinkStation D30 Platform Specifications sheet](#)

Chipset	Intel C602 Chipset		<div>Tower</div> <div><div><div>1 optical</div><div>2 optical</div><div>3 optical</div><div>4 media</div></div><div><div>5 disk*</div><div>6 disk</div><div>7 disk</div><div>8 disk</div><div>9 disk</div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60.6 lb (27.5kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Intel AMT	Intel Active Management Technology 8 supported		
Processor	Two LGA2011 sockets, integrated 4-channel DDR3 memory controller per processor, only one E5-1600 or E5-1600 v2 processor are supported		
Memory	UDIMM or RDIMM, ECC, DDR3 , 8-channel capable (4-channel per processor), sixteen 240-pin DIMM sockets, 128GB max (UDIMM, 8GBx16)/512GB max (RDIMM, 32GBx16)		
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over eight DIMMs requires dual processors• Mixing of RDIMM and UDIMM is not supported• Maximum memory capacity is also limited by operating system• When using processor from Xeon E5-1600 and E5-1600 v2 series, only eight DIMM sockets for CPU1 are available and max memory capacity is 64GB (UDIMM, 8GBx8)/256GB (RDIMM, 32GBx8)		
Graphics	Two PCI Express 3.0 x16 slots for graphics adapters and GPU computing processors, supports NVIDIA SLI technology, NVIDIA Maximus technology		
Onboard drive controllers	<ul style="list-style-type: none">• Four SATA connectors via integrated Advanced Host Controller Interface (AHCI) controller in chipset, two SATA 6.0Gb/s (red), two SATA 3.0Gb/s (orange), RAID 0, 1, 5, 10 support• Four SATA connectors via integrated Storage Controller Unit (SCU) controller in chipset, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support		
Upgrade ROM for onboard drive controllers (optional)	<i>One of the following upgrade ROM is supported, the option upgrades the four SATA connectors on SCU controller to:</i> <ul style="list-style-type: none">• five SATA connectors with optional SATA HDD Enablement Module, SATA 3.0Gb/s, RAID 0, 1, 5, 10 support• five SATA/SAS connectors with optional SAS HDD Enablement Module, SATA 3.0Gb/s, SAS 3.0 Gb/s, RAID 0, 1, 10 support		
Discrete drive controller (opt)	None		
Hard drive(s)	<div>3.5" SATA: SATA 6.0Gb/s, 7200 rpm</div> <div>3.5" Hybrid: SATA 6.0Gb/s, 7200 rpm, integrated 8GB NAND flash</div> <div>2.5" SATA: SATA 6.0Gb/s, 10000 rpm</div> <div>3.5" SAS/2.5" SAS: SAS 6.0Gb/s, 15000 rpm</div> <div>2.5" SSD: Solid State Drive (SSD), SATA 6.0Gb/s</div> <div>mSATA: OPAL-capable on some models</div> <div>mSATA SSD, SATA 6.0Gb/s</div>		
Optical	Supports DVD-ROM, DVD±RW, or Blu-ray Burner, SATA interface		
Media reader (opt)	Optional media card reader on selected models		
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)		
Rear ports	Eight USB 2.0, two USB 3.0 (blue), serial (9-pin), two ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
IEEE 1394 adptr (optional)	Optional FireWire PCIe adapter on selected models, 1394a-2000, 400Mbps, one 6-pin port on rear, one 6-pin port on front		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Onboard Ethernet	Dual onboard gigabit ethernet, Intel 82579 and 82574		
Security chip	STMicroelectronics ST33TPM12LPC for TPM function, TCG 1.2-compliant		
Keyboard/Mouse	104-key keyboard (USB)/Optical Wheel Mouse (USB)		
Power supply	1120 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		

<div>Bay 1-3: 5.25", 1.6" high, external, for optical</div> <div>Bay 4: 3.5", 1" high, external, for media reader</div> <div>Bay 5-9: 3.5", 1" high, internal, for hard drive*</div>
<div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x4 elec, near CPU)</div> <div>Slot 2: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 3.0 x16**</div> <div>Slot 5: full-length, full-height, PCIe 2.0 x4</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div>
<div>** Adapters >75W use auxiliary power connector(s) from PSU</div>

<div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on/Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O enable/disable• USB 2.0 ports enable/disable individually• USB 3.0 ports enable/disable concurrently• Chassis intrusion switch on selected model(s)</div>
<div>ISV certifications</div> <div>Please visit www.lenovo.com/support/ISV</div>
<div>Environmental certifications</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>Supports ThinkVantage® technologies</div>

See footnotes for important warranty information
Model(s) announced April 1, 2014

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ThinkStation D30 Optional Configurations

Partial list of core options supported on ThinkStation D30

Processor (2nd processor and heat sink options)	
ThinkStation C30, D30 Processor Heat Sink	0A65721
ThinkStation CPU Xeon E5-2660	4XG0E76794
ThinkStation CPU Xeon E5-2650	4XG0E76795
ThinkStation CPU Xeon E5-2640	4XG0E76796
ThinkStation CPU Xeon E5-2630	4XG0E76797
ThinkStation CPU Xeon E5-2620	4XG0E76798
ThinkStation CPU Xeon E5-2609	4XG0E76799
ThinkStation CPU Xeon E5-2603	4XG0E76800
Memory	
2GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	43R2033
4GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	57Y4138
8GB DDR3 1333 (PC3 10600) ECC UDIMM Memory	0A65718
4GB DDR3 1600 (PC3 12800) RDIMM Memory Workstation Memory	0A65732
8GB DDR3 1600 (PC3 12800) RDIMM Memory Workstation Memory	0A65733
Disk Drive	
Lenovo 500GB SATA HDD (7200)	43R1990
Lenovo 1TB SATA HDD (7200)	45J7918
ThinkStation 1TB 3.5" SATA Hybrid Hard Drive (7200)	4XB0F18665
ThinkStation 2TB 3.5" SATA Hybrid Hard Drive (7200)	4XB0F18666
ThinkStation 300GB 3.5" SAS Hard Drive (15K)	4XB0F18672
ThinkStation 450GB 3.5" SAS Hard Drive (15K)	43N3424
ThinkStation 600GB 3.5" SAS Hard Drive (15K)	4XB0F18673
ThinkStation 128GB SATA 2.5" Solid State Drive	4XB0F18670
ThinkStation 180GB Solid State Drive	0B47308
ThinkStation 256GB SATA 2.5" Solid State Drive	4XB0F18671
ThinkStation 256GB SATA 2.5" Solid State Drive - OPAL	4XB0F22432
Graphics	
NVIDIA NVS 300 512MB Dual DVI or Dual VGA Adapter	0B47390
NVIDIA NVS 310 512MB Dual DisplayPort Adapter	0B47074
NVIDIA NVS 510 2GB Quad Mini-DisplayPort Graphics Adapter	0B47077
NVIDIA Quadro 410 512MB Single DVI & Single DisplayPort Adapter	0B47075
NVIDIA Quadro K600 1GB Single DVI & Single DisplayPort Adapter	0B47394
NVIDIA Quadro K2000 2GB Single DVI & Dual DisplayPort Adapter	0B47392
NVIDIA Quadro K4000 3GB Single DVI & Dual DisplayPort Adapter	0B47393
NVIDIA Quadro K5000 4GB Dual DisplayPort & Dual DVI Graphics Adapter	0B47081
Others	
ThinkStation C-Series, D-Series Rail Kit	57Y4482

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

Disclaimer

Lenovo provides the information in the Product Specifications Reference (PSREF) withdrawn product books on an "AS-IS" basis. Because the actual products have been withdrawn from marketing, the information in these withdrawn product books is no longer maintained or updated. The referenced footnote numbering may not correspond with the listed footnotes.

PSREF books for the withdrawn systems:

http://www.lenovo.com/psref/psrefs_withdrawn.html

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Support Dept., EMEA Services, Lenovo, Eisteinova 21, 851 01 Bratislava, Slovakia. Lenovo makes no representation or warranty regarding third party products or services.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less.

³ **Systems with limited onsite service** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. Support phone list available at www-307.ibm.com/pc/support/site.wss/document.do?Indocid=MIGR-70552

⁴ **SATA/SAS:** The system configuration supports the installation of SATA, SAS, or mixing of SATA and SAS. But mixing of SATA and SAS disks into one RAID array will not be supported.

⁵ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.

⁶ **Multi-Burner Plus** is a DVD±RW device that reads and writes to DVD-RAM, DVD-R, DVD-RW, DVD+R, and DVD+RW. It also reads and writes to CD-R and CD-RW media. Super Multi-Burner DL also writes to DVD+R double layer media.

⁷ **Lenovo Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. See Lenovo Warranty Services terms and conditions for complete details and restrictions.

⁸ **RAID:** Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

RAID levels and requirements:

- **RAID 0 (striping)** provides increased performance by writing data across multiple drives.
- **RAID 1 (mirroring)** provides fault tolerance by writing the data on two drives.
- **RAID 5 (striping with parity)** uses distributed parity data to provide fault tolerance more efficiently than RAID 1. Requires three or more drives.
- **RAID 10 (or RAID 1+0)** combines RAID 1 and RAID 0 to create a stripe of mirrors that is fault tolerant while offering increased performance. Requires four drives.

⁹ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

ThinkStation

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Morrisville, NC 27560
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ThinkServer®

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Product Specifications Reference

Version 452, April 2014

Version 452, April 2014

ThinkServer® Servers

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Summary of Changes

This section describes the changes made in this version of ThinkServer PSREF and in previous version.
This section includes changes for the three most recent versions, starting with Version 450.
This edition might also include minor corrections and editorial changes which are not identified.

April 15, 2014 - Version 452

Changes in this update

- ▶ Selected RD340/RD440/RD540/RD640 models are withdrawn and labeled as **red**

February 25, 2014 - Version 450

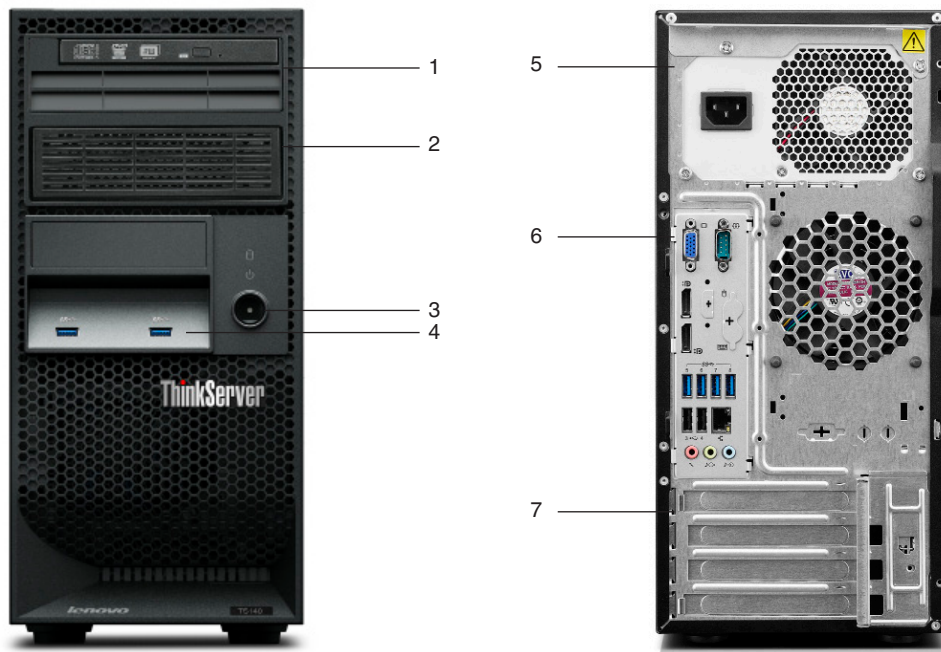
Additions in this update

- ▶ New section
ThinkServer Servers, contains all ThinkServer servers pages
- ▶ New section
ThinkServer Storage, contains ThinkServer storage pages
- ▶ New section
Summary of changes, contains changes list for the three most recent versions
- ▶ New product
ThinkServer TD340 ann January 21, 2014. Includes the following pages:
ThinkServer TD340 Overview
ThinkServer TD340 TopSeller Models - 70B7 - I
ThinkServer TD340 TopSeller Models - 70B7 - II
ThinkServer TD340 TopSeller Models - 70B7 - III
ThinkServer TD340 TopSeller Models - 70B7 - IV
ThinkServer TD340 Relationship Model
ThinkServer TD340 Platform Systems Specifications - I of II
ThinkServer TD340 Platform Systems Specifications - II of II
ThinkServer TD340 Optional Configurations
ThinkServer TD340 Operating System and Virtualization Supportability Matrix
ThinkServer TD340 Services Upgrade Options
- ▶ New product
ThinkServer SA120 ann February 11, 2014. Includes the following pages:
ThinkServer SA120 Direct Attached Storage Photography
ThinkServer SA120 Direct Attached Storage - Standard Models

Changes in this update

- ▶ Updates Expansion slots informations on ThinkServer RD330 and RD340

ThinkServer TS140 - Overview



Front view

1. Optional slim optical + 3.5" drive bay in standard 5.25" bay
2. Optional 3.5" hard drive bay
3. Power Button
4. Front I/O: 2 USB 3.0 (blue)

Rear view

5. Power Supply:
280 watts 80 PLUS Bronze/450 watts 80 PLUS Platinum
6. Rear I/O: 2 USB 2.0
4 USB 3.0 (blue)
1 serial (9-pin)
1 RJ-45 (GbE)
1 line-in
1 line-out
1 microphone-in
2 DisplayPort (for Intel HD Graphics)
1 VGA (for Intel HD Graphics)
7. 1 PCIe 3.0 x16
1 PCIe 2.0 x1
1 PCIe 2.0 x16 (x4 elec)
1 PCI

Internal

- One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3, Core-i3 4000, and Pentium families
- 4 DIMM sockets, supports up to 32GB ECC UDIMM memory
- Up to four 3.5" hard drive bays, two 3.5" hard drive bays standard

Mechanical

- Raven black color; metal case
- Rack-mountable to 5U
- 6.89"W x 16.97"D x 14.76"H
- 175mm W x 431mm D x 375mm H
- 28.66 lb (13kg) max configuration
- 25-liter

ThinkServer TS140 (70A4) - TopSeller (September 2013)


Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A4001LUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001MUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	1x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001NUX	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001PUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD	No	No	280W	No	No	1
70A4001QUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	RAID 1	2x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD	No	No	280W	No	Foundation	1
70A4001RUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	RAID 1	2x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD	No	No	280W	No	Essentials	1
70A4001SUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	1x1TB 3.5" SATA (4x3.5" Bay)	Slim DVD	No	No	280W	No	No	1


¹ Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays (see right)
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel i217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD[®] certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



Left



Front

Drive bays

- Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
- Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
- Optional 3rd 2.5" drive bay
- Standard 3.5"/2.5" primary drive bay
- Standard 3.5"/2.5" 2nd drive bay

Note:
 4x3.5" bays models: Bay 1, 2, 4, 5 are included in models
 3x3.5" bays models: Bay 2, 4, 5 are included in models
 2x3.5" bays models: Bay 4, 5 are included in models

Expansion Slots

Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
 Slot 4: half-length, full-height, PCI 2.3

Security

- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

See footnotes for important warranty information
 Model(s) announced September 10, 2013

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 (70A4-1) September 2013

ThinkServer TS140 (70A5) - TopSeller (September 2013)

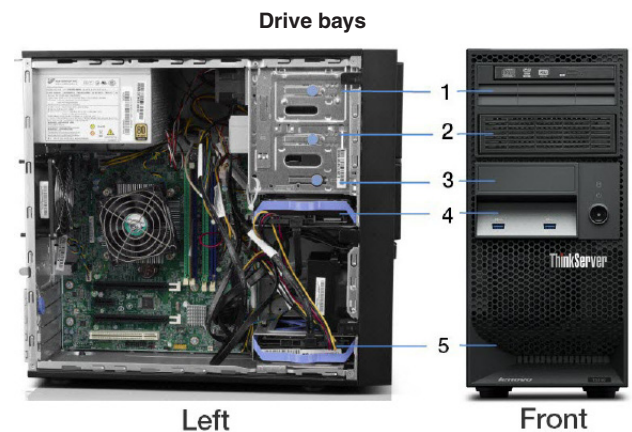
Product Specifications Reference (PSREF)

Type-model*	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A5000BUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD±RW	No	No	450W	No	No	1

* Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays (see right)
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD[®] certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
3: Optional 3rd 2.5" drive bay
4: Standard 3.5"/2.5" primary drive bay
5: Standard 3.5"/2.5" 2nd drive bay

Note:
4x3.5" bays models: Bay 1, 2, 4, 5 are included in models
3x3.5" bays models: Bay 2, 4, 5 are included in models
2x3.5" bays models: Bay 4, 5 are included in models

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
Slot 2: half-length, full-height, PCIe 2.0 x1
Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
Slot 4: half-length, full-height, PCI 2.3

Security

- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

ThinkServer TS140 (70A0) - September 2013

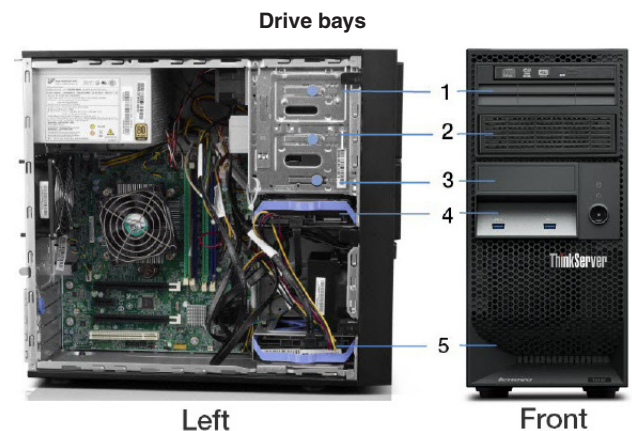
Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage (Drive bays)	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A00003US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	2GBx4	Intel HD P4600	RAID 0	4x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	1xParallel	1x350-T2	280W	No	Foundation	1
70A00006US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	2GBx4	Intel HD P4600	RAID 0	4x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	2xIntel CT	280W	No	Foundation	1
70A00009UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000AUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000BUX	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000CUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	No	1x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000DUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	RAID 1	2x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Foundation	1

¹ Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays (see right)
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1GbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2GbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4GbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD[®] certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
 3: Optional 3rd 2.5" drive bay
 4: Standard 3.5"/2.5" primary drive bay
 5: Standard 3.5"/2.5" 2nd drive bay

Note:
 4x3.5" bays models: Bay 1, 2, 4, 5 are included in models
 3x3.5" bays models: Bay 2, 4, 5 are included in models
 2x3.5" bays models: Bay 4, 5 are included in models

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
 Slot 4: half-length, full-height, PCI 2.3

Security

- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

See footnotes for important warranty information
 Model(s) announced September 10, 2013

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 (70A0-1) September 2013

ThinkServer TS140 (70A0) - September 2013 - II

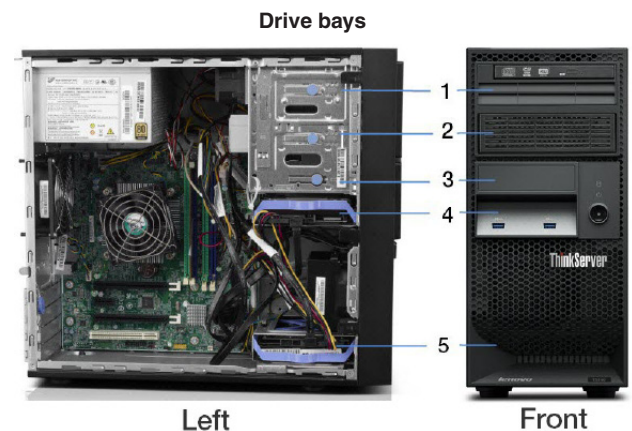
Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A0000EUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	RAID 1	2x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Essentials	1
70A0000FUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	RAID 1	2x500GB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Standard	1
70A0000GUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000HUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000JUX	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD P4600	No	Open (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	No	1
70A0000KUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD P4600	RAID 1	2x1TB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Foundation	1
70A0000LUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD P4600	RAID 1	2x1TB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Essentials	1

¹ Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays (see right)
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89" x 16.97" x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD[®] certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
 3: Optional 3rd 2.5" drive bay
 4: Standard 3.5"/2.5" primary drive bay
 5: Standard 3.5"/2.5" 2nd drive bay

Note:
 4x3.5" bays models: Bay 1, 2, 4, 5 are included in models
 3x3.5" bays models: Bay 2, 4, 5 are included in models
 2x3.5" bays models: Bay 4, 5 are included in models

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
 Slot 4: half-length, full-height, PCI 2.3

Security

- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

See footnotes for important warranty information
 Model(s) announced September 10, 2013

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 (70A0-2) September 2013

ThinkServer TS140 (70A0) - September 2013 - III

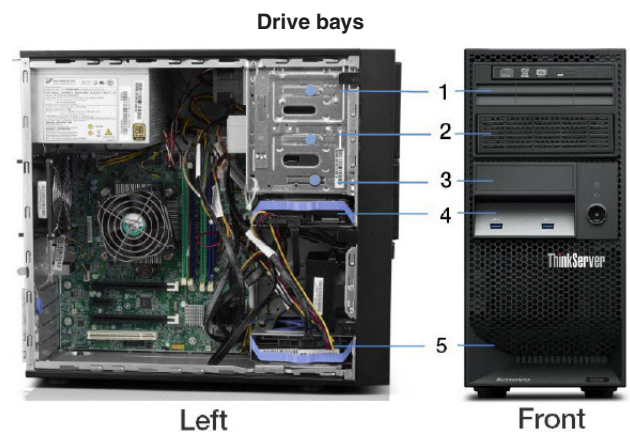
Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A0000MUS	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD P4600	RAID 1	2x1TB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	No	280W	No	Standard	1
70A0000NUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx1	Intel HD P4600	No	2x2TB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	1x350-T2	280W	No	No	3
70A0000PUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx2	Intel HD P4600	No	2x2TB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	1x350-T2	280W	No	No	3
70A0000QUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	8GBx4	Intel HD P4600	No	2x2TB 3.5" SATA (4x3.5" Bay)	Slim DVD±RW	No	1x350-T2	280W	No	No	3

¹ Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system.

- For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays (see right)
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter(2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (<i>Option PN: OC19515</i>)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD[®] certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
- 2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
- 3: Optional 3rd 2.5" drive bay
- 4: Standard 3.5"/2.5" primary drive bay
- 5: Standard 3.5"/2.5" 2nd drive bay

Note:
4x3.5" bays models: Bay 1, 2, 4, 5 are included in models
3x3.5" bays models: Bay 2, 4, 5 are included in models
2x3.5" bays models: Bay 4, 5 are included in models

Expansion Slots

- Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU)
Slot 2: half-length, full-height, PCIe 2.0 x1
Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec)
Slot 4: half-length, full-height, PCI 2.3

Security

- Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)
- Power-on password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)

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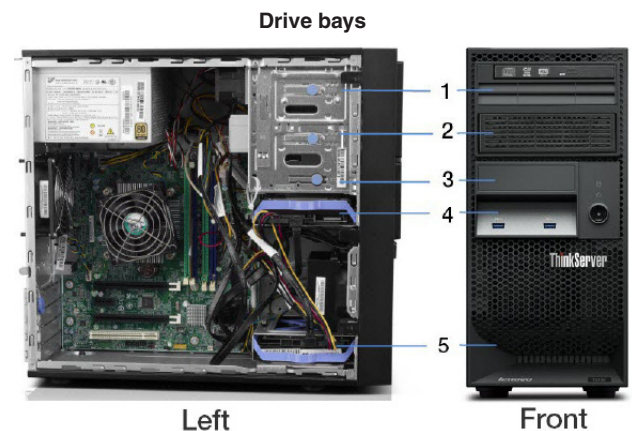
Product Specifications Reference (PSREF)

Type-model*	Processor	Memory type	Memory DIMMs	Graphics	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Power Supply	Rack kit	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70A10000US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz ECC	8GBx4	NVS 300	RAID 10	4x4TB 3.5 SATA (4x3.5" Bay)	Slim DVD±RW	1xParallel	2xIntel CT	450W	No	Foundation	1
70A10001US	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz ECC	8GBx4	Quadro 600	RAID 10	4x2TB 3.5 SATA (4x3.5" Bay)	Slim DVD±RW	No	1xIntel CT	450W	No	Foundation	1

* Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system.

• For detailed ThinkServer TS140 platform specifications, please see [ThinkServer TS140 Platform Specifications sheet](#)

Systems management	EasyStartup, EasyUpdate on all models; Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)
Chipset	Intel C226 Chipset
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section) Also supports the following optional discrete graphics adapters: <ul style="list-style-type: none"> NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MB NVIDIA Quadro 600, PCIe x16 adapter, 1GB
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support
Drive bays	Up to four 3.5" hard drive bays (see right)
Storage	3.5" SATA 6.0Gb/s hard drives, 7200 rpm
Optical	Supports DVD-ROM or DVD±RW, 1.6" high or slim, SATA interface
Front ports	Two USB 3.0 (blue)
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe)
Onboard Ethernet	One onboard gigabit ethernet, Intel I217
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)
Keyboard/Mouse	None (use USB port)
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 280 watts, autosensing, 85%, 80 PLUS Bronze qualified One fixed 450 watts, autosensing, 92%, 80 PLUS Platinum qualified
Form factor/ Rack-mountable	Tower, rack-mountable to 5U via optional ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)
Mechanical	<ul style="list-style-type: none"> 25-liter, raven black color; metal case (WxDxH) 6.89"x 16.97"x 14.76"/175mm x 431mm x 375mm 28.66 lb (13kg) max configuration
Serviceability	<ul style="list-style-type: none"> Toolless side cover removal Toolless disk and optical drive removal (standard bays) Toolless adapter retention Illuminated front icons
Base warranty	1 or 3-year parts and labor limited warranty ¹
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD[®] certified Energy Star Server 1.1 qualified/ RoHS-compliant More environmental information and requirements, please see ThinkServer TS140 Platform Specifications sheet



- Drive bays**
- 1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay
2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay
3: Optional 3rd 2.5" drive bay
4: Standard 3.5"/2.5" primary drive bay
5: Standard 3.5"/2.5" 2nd drive bay



Note:
4x3.5" bays models: Bay 1, 2, 4, 5 are included in models
3x3.5" bays models: Bay 2, 4, 5 are included in models
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<p>Expansion Slots</p> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3</p>	<p>Security</p> <ul style="list-style-type: none"> Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal) Power-on password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all)
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See footnotes for important warranty information
Model(s) announced September 10, 2013

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ThinkServer TS140 Platform Specifications - System Specifications (I of III)

Components	Specification																																																																																																																																																
Form factor	Tower, rack-mountable to 5U via ThinkServer Tower to Rack Shelf Conversion Kit (Option PN: 0C19515)																																																																																																																																																
Chipset	Intel C226 Chipset																																																																																																																																																
Systems management	<ul style="list-style-type: none">Intel Active Management Technology 9 on models with Xeon processor (KVM function needs Intel Xeon E3-12x5 v3 processors)EasyStartupEasyUpdate																																																																																																																																																
Processor	<p>One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3, Core-i3 4000, and Pentium G3000 families, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on selected processors.</p> <p>The following processors are supported:</p> <table><thead><tr><th>Processor Number</th><th># of Cores</th><th># of Threads</th><th>Clock Speed</th><th>Max Turbo Frequency</th><th>Cache</th><th>Memory speed</th><th>ECC Memory Supported</th><th>Processor Graphics</th></tr></thead><tbody><tr><td>Xeon E3-1285 v3</td><td>4</td><td>8</td><td>3.6 GHz</td><td>4 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4700</td></tr><tr><td>Xeon E3-1280 v3</td><td>4</td><td>8</td><td>3.6 GHz</td><td>4 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1275 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr><tr><td>Xeon E3-1270 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1245 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr><tr><td>Xeon E3-1240 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1230 v3</td><td>4</td><td>8</td><td>3.3 GHz</td><td>3.7 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1225 v3</td><td>4</td><td>4</td><td>3.2 GHz</td><td>3.6 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr><tr><td>Xeon E3-1220 v3</td><td>4</td><td>4</td><td>3.1 GHz</td><td>3.5 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Core i3-4340</td><td>2</td><td>4</td><td>3.6 GHz</td><td></td><td>4 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr><tr><td>Core i3-4330</td><td>2</td><td>4</td><td>3.5 GHz</td><td></td><td>4 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4600</td></tr><tr><td>Core i3-4130</td><td>2</td><td>4</td><td>3.4 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics 4400</td></tr><tr><td>Pentium G3430</td><td>2</td><td>2</td><td>3.3 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics</td></tr><tr><td>Pentium G3420</td><td>2</td><td>2</td><td>3.2 GHz</td><td></td><td>3 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics</td></tr><tr><td>Pentium G3220</td><td>2</td><td>2</td><td>3 GHz</td><td></td><td>3 MB</td><td>DDR3-1333</td><td>Yes</td><td>Intel HD Graphics</td></tr></tbody></table> <p>Notes: All information is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/</p>	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics	Xeon E3-1285 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4700	Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes		Core i3-4340	2	4	3.6 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Core i3-4330	2	4	3.5 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600	Core i3-4130	2	4	3.4 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics 4400	Pentium G3430	2	2	3.3 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics	Pentium G3420	2	2	3.2 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics	Pentium G3220	2	2	3 GHz		3 MB	DDR3-1333	Yes	Intel HD Graphics
Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics																																																																																																																																									
Xeon E3-1285 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4700																																																																																																																																									
Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																									
Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																									
Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																									
Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes																																																																																																																																										
Core i3-4340	2	4	3.6 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																									
Core i3-4330	2	4	3.5 GHz		4 MB	DDR3-1600	Yes	Intel HD Graphics 4600																																																																																																																																									
Core i3-4130	2	4	3.4 GHz		3 MB	DDR3-1600	Yes	Intel HD Graphics 4400																																																																																																																																									
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Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available																																																																																																																																																
Memory DIMM sockets	Four 240-pin DIMM sockets																																																																																																																																																
Memory capacity	Up to 32GB (8GBx4)																																																																																																																																																
Memory protection	ECC																																																																																																																																																
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs																																																																																																																																																
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support																																																																																																																																																
Drive bays	<p>Supports one 5.25" optical and two 3.5" disk drive bays in standard models, direct cable, no hot-swap up to one slim optical and four 3.5"/2.5" disk drive bays (pending 2.5" disk drives availability):</p> <div><div></div><div></div><div><p>1: Standard 5.25", 1.6" high optical or optional slim optical + 4th 3.5" drive bay</p><p>2: Optional 3rd 3.5" drive bay or optional 4th 2.5" drive bay</p><p>3: Optional 3rd 2.5" drive bay</p><p>4: Standard 3.5"/2.5" primary drive bay</p><p>5: Standard 3.5"/2.5" 2nd drive bay</p></div></div> <p>Notes:</p> <ul style="list-style-type: none">Standard optical and hard drive bays are included in models; optional optical and hard drive bays are available on models with the corresponding drives onlyImage above is for reference only. Model in this image contains optional slim optical + 3.5" 2nd hard drive bay with supplemental fan (Bay 1) and optional 3.5" 3rd hard drive bay (Bay 2)Optional slim optical + 3.5" drive bay (Bay 1) and optional 3rd 2.5" drive bay (Bay 3) can not be supported concurrently on one model.																																																																																																																																																

ThinkServer TS140 Platform Specifications (II of III)

Components	Specification		
Optical	Supports DVD±RW or DVD ROM, 1.6" high or slim, SATA interface		
Graphics	<ul style="list-style-type: none">Integrated Intel HD Graphics on Xeon E3-12x5 v3, Core i3, and Pentium processors, uses main memory, works along with discrete graphics to support multi-display, enables three display connectors (2 DisplayPort, 1 VGA) on rear ports (detailed information please see Rear ports section)Also supports the following optional discrete graphics adapters:<ul style="list-style-type: none">NVIDIA Quadro NVS 300, PCIe x16 adapter, 512MBNVIDIA Quadro 600, PCIe x16 adapter, 1GB		
Front ports	Two USB 3.0 (blue)		
Rear ports	One VGA and two DisplayPort for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)		
Expansion Slots	Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3		
Onboard Ethernet	One onboard gigabit ethernet, Intel I217		
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none">Intel Gigabit CT Desktop Adapter (1GbE, RJ-45)Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45)Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)		
Keyboard/mouse	None (use USB port)		
Power supply	Supports one of the follwing, depending on models: <ul style="list-style-type: none">One fixed 280 watts, autosensing, 85% PSU, 80 PLUS Bronze qualifiedOne fixed 450 watts, autosensing, 92% PSU, 80 PLUS Platinum qualified		
Security	<ul style="list-style-type: none">Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliantPadlock loop (in rear for opt padlock; padlock prohibits side cover removal)Security slot (in rear for optional Kensington Microsaver cable; prohibits side cover removal)Power-on passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (front or all)		
Mechanical	<ul style="list-style-type: none">Raven black color; metal case6.89"W x 16.97"D x 14.76"H175mm W x 431mm D x 375mm H28.66 lb (13kg) max configuration25-liter		
Serviceability	<ul style="list-style-type: none">Toolless side cover removalToolless disk and optical drive removal (standard bays)Toolless adapter retentionIlluminated front icons		
Environmental certifications	<ul style="list-style-type: none">GREENGUARD[®] certifiedEnergy Star Server 1.1 qualifiedRoHS-compliant		
EMC	FCC Class A		
240VA	Supports		
Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)		
Temperature - non operating (no package)	-10 °C to 60 °C		
Temperature - non operating (with package)	-40 °C to 70 °C		
Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)		
Humidity - operating	10%~80%, non-condensing		
Humidity - non operating (no package)	10%~90%, non-condensing		
Humidity - non operating (with package)	10%~90%, non-condensing		
Acoustic noise (idle/working mode)	Category	Min Configuration	Best Configuration
	CPU	1 CPU	1 CPU
	Optical Drive	0 DVD	1 DVD
	Drive Bays	Up to one	Up to three
	HDD	1x 500GB SATA	3x 500GB SATA
	Memory	1x 2GB UDIMM	1x 2GB UDIMM
	PSU	280W	450W
	RAID	Embedded SATA	Embedded RAID
	Add-on card	No	1xVGA
	Sound Pressure (operating)	26 dB(A)	35 dB(A)
	Sound Pressure (idle)	25 dB(A)	34 dB(A)

ThinkServer TS140 Platform Specifications - System Specifications (III of III)

Components	Specification
Warranty	1 or 3-year limited warranty, parts and labor, more services information see S-TS1 and S-TS3 sheet
Preloaded operating systems	<ul style="list-style-type: none">• Windows Server® 2012 Foundation• Windows Server 2012 Essentials• Windows Server 2012 Standard
Supported operating systems and virtualization software	<ul style="list-style-type: none">• Windows 7• Windows 8• Windows Server 2008 R2 Standard• Windows Server 2008 R2 Enterprise• Windows Small Business Server 2011 Essentials• Windows Small Business Server 2011 Standard• Windows Small Business Server 2011 Premium Add-On <p><i>Notes:</i> 1. Supported only, no preloaded models 2. Windows 7 and Windows 8 are not supported by EasyStartup</p>

ThinkServer TS140 Optional Configurations

Memory	
ThinkServer 2GB DDR3L-1600MHz (1RX8) ECC UDIMM	0C19498
ThinkServer 4GB DDR3L-1600MHz (1RX8) ECC UDIMM	0C19499
ThinkServer 8GB DDR3L-1600MHz (2RX8) ECC UDIMM	0C19500
Disk Drive	
ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19501
ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19502
ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19503
ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19504
ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19505
Connectivity	
ThinkServer 1Gbps Ethernet I350-T2 Server Adapter by Intel	0C19506
ThinkServer 1Gbps Ethernet I350-T4 Server Adapter by Intel	0C19507
ThinkServer CT2 1Gbps Single Port Base-T Ethernet Adapter by Intel	4XC0F28725
Parallel/Serial Port Adapter	
ThinkServer Single Parallel Port PCI Adapter	0C19508
ThinkServer Single Serial Port PCI Adapter	0C19509
ThinkServer Dual Serial Port PCI Adapter	0C19510
ThinkServer Dual Serial Port PCIe Adapter	0C19511
Graphics	
ThinkServer 1GB Quadro 600 Graphic Adapter by NVIDIA	0C19512
ThinkServer 512MB NVS 300 PCIe x16 Graphic Adapter by NVIDIA	0C19513
3.5" Hard Drive Conversion Kit	
ThinkServer 3.5" HDD to 5.25" Tray Convertor Kit	0C19514
ThinkServer 3.5" HDD to 5.25" Tray Convertor with Slim ODD Kit	0C19529
Tower to Rack Shelf Conversion Kit	
ThinkServer Tower to Rack Shelf Conversion Kit	0C19515

For more information on server accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkserveraccessories

www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkServer TS440 - Overview

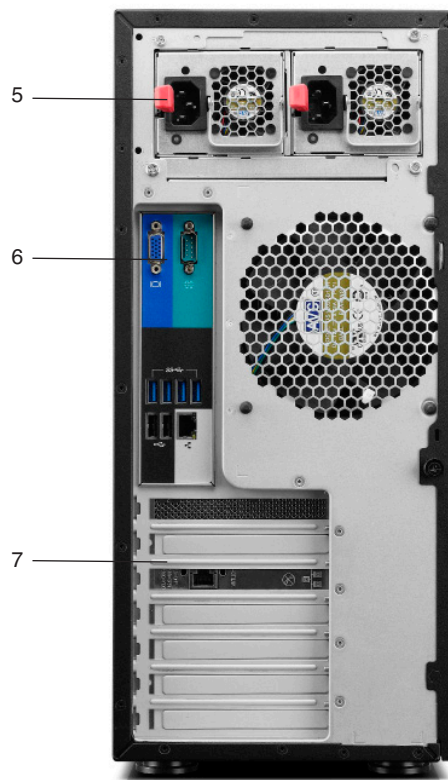


Front view

1. Front I/O: 2 USB 3.0 (blue)
2. Power Button
3. Two 5.25" optical drive bays
(up to one optical on models with onboard SATA controller)
4. Eight 3.5" hot-swap drive bays
(Also supports:
4 x 3.5" direct cable bays,
or 4 x 3.5" hot-swap bays,
or 8 x 2.5" hot-swap bays)

Rear view

5. Power Supply:
Up to two redundant 450 watts 80 PLUS Gold or
fixed one 450 watts 80 PLUS Platinum
6. Rear I/O: 2 USB 2.0
4 USB 3.0 (blue)
1 serial (9-pin)
1 RJ-45 (GbE)
1 VGA (for Intel HD Graphics)
7. 1 PCIe 3.0 x16 (with optional RAID adapter)
1 PCIe 2.0 x1
1 PCIe 2.0 x16 (x4 elec, with optional ethernet adapter)
1 PCI



Internal

- One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3 family
- 4 DIMM sockets, supports up to 32GB ECC UDIMM memory
- Up to eight hard drive bays

Mechanical

- Tower, business black color, metal case
- Rack-mountable to 5U
- W x H (without foot) x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm
- 61.7 lb (28kg) max configuration


ThinkServer TS440 (70AQ) - TopSeller (September 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Disk Bays ²	RAID controller	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Windows Server 2012 Preloaded	Power Supply	Base on-site warranty (-year)
70AQ0005US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	RAID 1	2x500GB 3.5" SATA	1xDVD±RW	No	No	Foundation	1x450W (hot-swap, redundant with 2)	3
70AQ0006US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	RAID 1	2x500GB 3.5" SATA	1xDVD±RW	No	No	Essentials	1x450W (hot-swap, redundant with 2)	3
70AQ0007US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	RAID 1	2x500GB 3.5" SATA	1xDVD±RW	No	No	Standard	1x450W (hot-swap, redundant with 2)	3
70AQ0009UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	1
70AQ000AUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3
70AQ000BUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3
70AQ000CUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	8x3.5" HS	RAID 500 (discrete, 0/1/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3

1. Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system. 2. HS = Hot-swap, DC = Direct cable, non-hot swap

• For detailed ThinkServer TS440 platform specifications, please see [ThinkServer TS440 Platform Specifications sheet](#)

Systems management	<ul style="list-style-type: none"> Intel Active Management Technology 9 (KVM function needs Intel Xeon E3-12X5 v3 processors) EasyStartup EasyUpdate 	<p>Optical Bays</p> <ul style="list-style-type: none"> Two 5.25" optical bays for all models (Up to one optical on onboard SATA controller models) <p>Hard Drive Bays</p> <ul style="list-style-type: none"> Four 3.5" hard drive bays, no hot-swap, direct cable (4x3.5" DC) Four 3.5" hot-swap hard drive bays (4x3.5" HS) Eight 3.5" hot-swap hard drive bays (8x3.5" HS) Eight 2.5" hot-swap hard drive bays (8x2.5" HS)  <p>8 x 2.5" HS 4 x 3.5" HS 8 x 3.5" HS</p>
Chipset	Intel C226 Chipset	
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors	
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable	
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)	
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12X5 v3 processors, uses main memory, works along with discrete graphics to support multi-display, enables VGA connector on rear (detailed information please see Rear ports section) Supports optional discrete NVIDIA NVS 300 adapter, PCIe x1, 512MB 	
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support	
Discreted SATA/SAS controller (optional)	Supports the following: <ul style="list-style-type: none"> ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support; optional upgrade key for ThinkServer RAID 500 adapter, add RAID 5, 50 support ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support; optional Intelligent Battery Backup Unit (iBBU08) for ThinkServer RAID 700 adapter <p><i>Notes:</i> RAID 50 and 60 are supported on 8 hard drive bays models only</p>	
Optical	Supports DVD±RW or DVD ROM, 1.6" high, SATA interface	
Front ports	Two USB 3.0 (blue)	
Rear ports	One VGA for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45)	<p>Mechanical</p> <ul style="list-style-type: none"> Tower, business black color, metal case W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm 61.7 lb (28kg) max configuration Rack-mountable to 5U (via optional Tower to Rack Shelf Conversion Kit, not included in standard model) Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons <p>Expansion Slots</p> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3</p> <p>Security</p> <ul style="list-style-type: none"> Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant Administrator password User password Front panel key lock Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all)
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe) 	
Onboard Ethernet	One onboard gigabit ethernet, Intel I217	
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45) 	
Keyboard/Mouse	None (use USB port)	
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 450 watts, universal, 80 PLUS Platinum qualified Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies 	
Base warranty	1 or 3-year parts and labor limited warranty ¹	
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD certified Energy Star Server 1.1 qualified RoHS-compliant More environmental information and requirements, please see ThinkServer TS440 Platform Specifications sheet	

See footnotes for important warranty information
Model(s) announced September 24, 2013

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(70AQ-1) October 2013


ThinkServer TS440 (70AQ) - TopSeller (September 2013) - II

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Disk Bays ²	RAID controller	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Windows Server 2012 Preloaded	Power Supply	Base on-site warranty (-year)
70AQ000DUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	8x3.5" HS	RAID 500 (discrete, 0/1/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3
70AQ000EUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	8x2.5 HS	RAID 500 (discrete, 0/1/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3
70AQ000FUX	Xeon E3-1245 v3 (4C/3.4GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	8x2.5 HS	RAID 500 (discrete, 0/1/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3
70AQ000GUX	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3
70AQ000HUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	8x3.5" HS	RAID 700 (discrete, 0/1/5/6/10/50/60)	No	Open	1xDVD±RW	No	No	No	1x450W (hot-swap, redundant with 2)	3
70AQ000NUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 500 (discrete, 0/1/10)	No	Open	1xDVD	No	No	No	1x450W (hot-swap, redundant with 2)	1
70AQ000PUX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 500 (discrete, 0/1/10)	No	Open	1xDVD	No	No	No	1x450W (hot-swap, redundant with 2)	3

1. Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system. 2. HS = Hot-swap, DC = Direct cable, non-hot swap

• For detailed ThinkServer TS440 platform specifications, please see [ThinkServer TS440 Platform Specifications sheet](#)

Systems management	<ul style="list-style-type: none"> Intel Active Management Technology 9 (KVM function needs Intel Xeon E3-12X5 v3 processors) EasyStartup EasyUpdate 	Optical Bays <ul style="list-style-type: none"> Two 5.25" optical bays for all models (Up to one optical on onboard SATA controller models)
Chipset	Intel C226 Chipset	Hard Drive Bays <ul style="list-style-type: none"> Four 3.5" hard drive bays, no hot-swap, direct cable (4x3.5" DC) Four 3.5" hot-swap hard drive bays (4x3.5" HS) Eight 3.5" hot-swap hard drive bays (8x3.5" HS) Eight 2.5" hot-swap hard drive bays (8x2.5" HS)
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors	
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable	
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)	
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12X5 v3 processors, uses main memory, works along with discrete graphics to support multi-display, enables VGA connector on rear (detailed information please see Rear ports section) Supports optional discrete NVIDIA NVS 300 adapter, PCIe x1, 512MB 	
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support	Mechanical <ul style="list-style-type: none"> Tower, business black color, metal case W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm 61.7 lb (28kg) max configuration Rack-mountable to 5U (via optional Tower to Rack Shelf Conversion Kit, not included in standard model) Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons
Discreted SATA/SAS controller (optional)	Supports the following: <ul style="list-style-type: none"> ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support; optional upgrade key for ThinkServer RAID 500 adapter, add RAID 5, 50 support ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support; optional Intelligent Battery Backup Unit (iBBU08) for ThinkServer RAID 700 adapter 	Expansion Slots <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3</p>
Optical	Supports DVD±RW or DVD ROM, 1.6" high, SATA interface	Security <ul style="list-style-type: none"> Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant Administrator password User password Front panel key lock Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all)
Front ports	Two USB 3.0 (blue)	
Rear ports	One VGA for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45)	
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe) 	
Onboard Ethernet	One onboard gigabit ethernet, Intel I217	
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45) 	
Keyboard/Mouse	None (use USB port)	
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 450 watts, universal, 80 PLUS Platinum qualified Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies 	
Base warranty	1 or 3-year parts and labor limited warranty ¹	
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD certified Energy Star Server 1.1 qualified RoHS-compliant More environmental information and requirements, please see ThinkServer TS440 Platform Specifications sheet	

See footnotes for important warranty information
 Model(s) announced September 24, 2013

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ThinkServer TS440 (70AN) - TopSeller (September 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Disk Bays ²	RAID controller	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Windows Server 2012 Preloaded	Power Supply	Base on-site warranty (-year)
70AN0001UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD	No	No	No	Fixed 450W (non-hot swap, no redundant)	1
70AN0002UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD	No	No	No	Fixed 450W (non-hot swap, no redundant)	3

1. Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system. 2. HS = Hot-swap, DC = Direct cable, non-hot swap

- For detailed ThinkServer TS440 platform specifications, please see [ThinkServer TS440 Platform Specifications sheet](#)

Systems management	<ul style="list-style-type: none"> • Intel Active Management Technology 9 (KVM function needs Intel Xeon E3-12X5 v3 processors) • EasyStartup • EasyUpdate 	Optical Bays <ul style="list-style-type: none"> • Two 5.25" optical bays for all models (Up to one optical on onboard SATA controller models)
Chipset	Intel C226 Chipset	Hard Drive Bays <ul style="list-style-type: none"> • Four 3.5" hard drive bays, no hot-swap, direct cable (4x3.5" DC) • Four 3.5" hot-swap hard drive bays (4x3.5" HS) • Eight 3.5" hot-swap hard drive bays (8x3.5" HS) • Eight 2.5" hot-swap hard drive bays (8x2.5" HS)
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors	
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable	
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)	
Graphics	<ul style="list-style-type: none"> • Integrated Intel HD Graphics on Xeon E3-12X5 v3 processors, uses main memory, works along with discrete graphics to support multi-display, enables VGA connector on rear (detailed information please see Rear ports section) • Supports optional discrete NVIDIA NVS 300 adapter, PCIe x1, 512MB 	
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support	8 x 2.5" HS
Discreted SATA/SAS controller (optional)	Supports the following: <ul style="list-style-type: none"> • ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support; optional upgrade key for ThinkServer RAID 500 adapter, add RAID 5, 50 support • ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support; optional Intelligent Battery Backup Unit (iBBU08) for ThinkServer RAID 700 adapter 	4 x 3.5" HS
Optical	Supports DVD±RW or DVD ROM, 1.6" high, SATA interface	8 x 3.5" HS
Front ports	Two USB 3.0 (blue)	Mechanical <ul style="list-style-type: none"> • Tower, business black color, metal case • W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm • 61.7 lb (28kg) max configuration • Rack-mountable to 5U (via optional Tower to Rack Shelf Conversion Kit, not included in standard model) • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons
Rear ports	One VGA for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45)	
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> • Single Parallel Port PCI Adapter (1xParallel) • Single Serial Port PCI Adapter (1xSerial) • Dual Serial Ports PCI Adapter (2xSerial PCI) • Dual Serial Ports PCIe Adapter (2xSerial PCIe) 	
Onboard Ethernet	One onboard gigabit ethernet, Intel I217	
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> • Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) • Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) • Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45) 	Expansion Slots <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3</p>
Keyboard/Mouse	None (use USB port)	
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> • One fixed 450 watts, universal, 80 PLUS® Platinum qualified • Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies 	
Base warranty	1 or 3-year parts and labor limited warranty ¹	
Environmental certifications	<ul style="list-style-type: none"> • GREENGUARD® certified • Energy Star Server 1.1 qualified • RoHS-compliant More environmental information and requirements, please see ThinkServer TS440 Platform Specifications sheet	Security <ul style="list-style-type: none"> • Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant • Administrator password • User password • Front panel key lock • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (front or all)


See footnotes for important warranty information
Model(s) announced September 24, 2013

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Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Disk Bays ²	RAID controller	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Windows Server 2012 Preloaded	Power Supply	Base on-site warranty (-year)
70AM0000US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	2GBx2	Intel HD P4600	4x3.5" DC	RAID 100 (onboard, 0/1/5/10)	RAID 1	2x500GB 3.5" SATA	1xDVD	No	1xIntel CT	Foundation	1x450W (hot-swap, redundant with 2)	1
70AM0001US	Xeon E3-1275 v3 (4C/3.5GHz/8MB/1600MHz)	1600MHz ECC	2GBx4	Intel HD P4600	8x3.5" HS	RAID 500+key (discrete, 0/1/5/10/50)	RAID 50	8x2TB 3.5" SATA	2xDVD±RW	No	1xIntel CT	Foundation	2x450W (hot-swap, redundant with 2)	1
70AM0002UX	Xeon E3-1280 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz ECC	4GBx3	NVS 300	8x2.5 HS	RAID 700 (discrete, 0/1/5/6/10/50/60)	RAID 6	3x600GB 2.5" SAS	1xDVD	No	1x350-T4	No	1x450W (hot-swap, redundant with 2)	1
70AM0003US	Xeon E3-1285 v3 (4C/3.6GHz/8MB/1600MHz)	1600MHz ECC	8GBx4	Intel HD P4700	8x2.5 HS	RAID 700 (discrete, 0/1/5/6/10/50/60)	RAID 60	8x900GB 2.5" SAS	1xDVD±RW	No	1x350-T2	Foundation	2x450W (hot-swap, redundant with 2)	1
70AM0004UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD	No	No	No	1x450W (hot-swap, redundant with 2)	3

1. Model in *italics* shows that this is a Global Model. "UX" model does not include preloaded operating system. 2. HS = Hot-swap, DC = Direct cable, non-hot swap

• For detailed ThinkServer TS440 platform specifications, please see [ThinkServer TS440 Platform Specifications sheet](#)

Systems management	<ul style="list-style-type: none"> Intel Active Management Technology 9 (KVM function needs Intel Xeon E3-12X5 v3 processors) EasyStartup EasyUpdate 	Optical Bays <ul style="list-style-type: none"> Two 5.25" optical bays for all models (Up to one optical on onboard SATA controller models) 		
Chipset	Intel C226 Chipset	Hard Drive Bays <ul style="list-style-type: none"> Four 3.5" hard drive bays, no hot-swap, direct cable (4x3.5" DC) Four 3.5" hot-swap hard drive bays (4x3.5" HS) Eight 3.5" hot-swap hard drive bays (8x3.5" HS) Eight 2.5" hot-swap hard drive bays (8x2.5" HS) 		
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors			
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable			
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)			
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12X5 v3 processors, uses main memory, works along with discrete graphics to support multi-display, enables VGA connector on rear (detailed information please see Rear ports section) Supports optional discrete NVIDIA NVS 300 adapter, PCIe x1, 512MB 			
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support			
Discreted SATA/SAS controller (optional)	Supports the following: <ul style="list-style-type: none"> ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support; optional upgrade key for ThinkServer RAID 500 adapter, add RAID 5, 50 support ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support; optional Intelligent Battery Backup Unit (iBBU08) for ThinkServer RAID 700 adapter 			
Optical	Supports DVD±RW or DVD ROM, 1.6" high, SATA interface			
Front ports	Two USB 3.0 (blue)			
Rear ports	One VGA for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45)			
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe) 			
Onboard Ethernet	One onboard gigabit ethernet, Intel I217			
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45) 			
Keyboard/Mouse	None (use USB port)			
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 450 watts, universal, 80 PLUS Platinum qualified Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies 			
Base warranty	1 or 3-year parts and labor limited warranty ¹			
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD certified Energy Star Server 1.1 qualified RoHS-compliant More environmental information and requirements, please see ThinkServer TS440 Platform Specifications sheet			
		Mechanical <ul style="list-style-type: none"> Tower, business black color, metal case W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm 61.7 lb (28kg) max configuration Rack-mountable to 5U (via optional Tower to Rack Shelf Conversion Kit, not included in standard model) Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons 		
		Expansion Slots <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3</p>		
		Security <ul style="list-style-type: none"> Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant Administrator password User password Front panel key lock Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all) 		

See footnotes for important warranty information
 Model(s) announced September 24, 2013

ThinkServer TS440 (70AL) - September 2013

Product Specifications Reference (PSREF)

Type-model ¹	Processor	Memory type	Memory DIMMs	Graphics	Disk Bays ²	RAID controller	Pre-conf RAID	Storage	Optical	Add-on ports	Discrete ethernet	Windows Server 2012 Preloaded	Power Supply	Base on-site warranty (-year)
70AL0000US	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	8GBx3	NVS 300	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	RAID 5	3x3TB 3.5" SATA	1xDVD±RW	No	1x350-T2	Foundation	Fixed 450W (non-hot swap, no redundant)	1
70AL0002UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	1x500GB 3.5" SATA	1xDVD	No	No	No	Fixed 450W (non-hot swap, no redundant)	3
70AL0003UX	Xeon E3-1225 v3 (4C/3.2GHz/8MB/1600MHz)	1600MHz ECC	4GBx1	Intel HD P4600	4x3.5" HS	RAID 100 (onboard, 0/1/5/10)	No	Open	1xDVD	No	No	No	Fixed 450W (non-hot swap, no redundant)	3

1. Model in italics shows that this is a Global Model. "UX" model does not include preloaded operating system. 2. HS = Hot-swap, DC = Direct cable, non-hot swap


• For detailed ThinkServer TS440 platform specifications, please see [ThinkServer TS440 Platform Specifications sheet](#)

Systems management	<ul style="list-style-type: none"> Intel Active Management Technology 9 (KVM function needs Intel Xeon E3-12X5 v3 processors) EasyStartup EasyUpdate 	Optical Bays <ul style="list-style-type: none"> Two 5.25" optical bays for all models (Up to one optical on onboard SATA controller models)
Chipset	Intel C226 Chipset	Hard Drive Bays <ul style="list-style-type: none"> Four 3.5" hard drive bays, no hot-swap, direct cable (4x3.5" DC) Four 3.5" hot-swap hard drive bays (4x3.5" HS) Eight 3.5" hot-swap hard drive bays (8x3.5" HS) Eight 2.5" hot-swap hard drive bays (8x2.5" HS)
Processor	One LGA1150 socket, integrated 2-channel DDR3 memory controller, optional integrated Intel HD Graphics on selected processors	
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable	
Memory DIMM sockets	Four 240-pin DIMM sockets, up to 32GB ECC UDIMM (Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs)	
Graphics	<ul style="list-style-type: none"> Integrated Intel HD Graphics on Xeon E3-12X5 v3 processors, uses main memory, works along with discrete graphics to support multi-display, enables VGA connector on rear (detailed information please see Rear ports section) Supports optional discrete NVIDIA NVS 300 adapter, PCIe x1, 512MB 	
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support	
Discreted SATA/SAS controller (optional)	Supports the following: <ul style="list-style-type: none"> ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support; optional upgrade key for ThinkServer RAID 500 adapter, add RAID 5, 50 support ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support; optional Intelligent Battery Backup Unit (iBBU08) for ThinkServer RAID 700 adapter 	
Optical	Supports DVD±RW or DVD ROM, 1.6" high, SATA interface	
Front ports	Two USB 3.0 (blue)	
Rear ports	One VGA for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45)	
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none"> Single Parallel Port PCI Adapter (1xParallel) Single Serial Port PCI Adapter (1xSerial) Dual Serial Ports PCI Adapter (2xSerial PCI) Dual Serial Ports PCIe Adapter (2xSerial PCIe) 	
Onboard Ethernet	One onboard gigabit ethernet, Intel I217	
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none"> Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45) Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45) Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45) 	
Keyboard/Mouse	None (use USB port)	
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 450 watts, universal, 80 PLUS® Platinum qualified Up to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies 	
Base warranty	1 or 3-year parts and labor limited warranty ¹	
Environmental certifications	<ul style="list-style-type: none"> GREENGUARD® certified Energy Star Server 1.1 qualified RoHS-compliant More environmental information and requirements, please see ThinkServer TS440 Platform Specifications sheet	Mechanical <ul style="list-style-type: none"> Tower, business black color, metal case W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm 61.7 lb (28kg) max configuration Rack-mountable to 5U (via optional Tower to Rack Shelf Conversion Kit, not included in standard model) Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons
		Expansion Slots <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3</p>
		Security <ul style="list-style-type: none"> Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliant Administrator password User password Front panel key lock Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all)

See footnotes for important warranty information
 Model(s) announced September 24, 2013

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ThinkServer TS440 Platform Specifications - I of III

Components	Specification																																																																																										
Form factor	Tower, rack-mountable to 5U via ThinkServer Tower to Rack Shelf Conversion Kit (<i>Option PN: 0C19515</i>)																																																																																										
Chipset	Intel C226 Chipset																																																																																										
Systems management	<ul style="list-style-type: none">Intel Active Management Technology 9 (KVM function needs Intel Xeon E3-12X5 v3 processors)EasyStartupEasyUpdate																																																																																										
Processor	<p>One LGA1150 socket, supports one processor from Intel Xeon E3-1200 v3 family, integrated 2-channel DDR3 memory controller, optional integrated processor graphics on Xeon E5-12X5 v3 processors.</p> <p>The following processors are supported:</p> <table><tr><th>Processor Number</th><th># of Cores</th><th># of Threads</th><th>Clock Speed</th><th>Max Turbo Frequency</th><th>Cache</th><th>Memory speed</th><th>ECC Memory Supported</th><th>Processor Graphics</th></tr><tr><td>Xeon E3-1285 v3</td><td>4</td><td>8</td><td>3.6 GHz</td><td>4 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4700</td></tr><tr><td>Xeon E3-1280 v3</td><td>4</td><td>8</td><td>3.6 GHz</td><td>4 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1275 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr><tr><td>Xeon E3-1270 v3</td><td>4</td><td>8</td><td>3.5 GHz</td><td>3.9 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1245 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr><tr><td>Xeon E3-1240 v3</td><td>4</td><td>8</td><td>3.4 GHz</td><td>3.8 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1230 v3</td><td>4</td><td>8</td><td>3.3 GHz</td><td>3.7 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr><tr><td>Xeon E3-1225 v3</td><td>4</td><td>4</td><td>3.2 GHz</td><td>3.6 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td>Intel HD Graphics P4600</td></tr><tr><td>Xeon E3-1220 v3</td><td>4</td><td>4</td><td>3.1 GHz</td><td>3.5 GHz</td><td>8 MB</td><td>DDR3-1600</td><td>Yes</td><td></td></tr></table> <p><i>Notes:</i> All information is provided by Intel and may be changed at any time without notice. The information herein is provided “as-is”. Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/</p>	Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics	Xeon E3-1285 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4700	Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes		Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600	Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes	
Processor Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	Memory speed	ECC Memory Supported	Processor Graphics																																																																																			
Xeon E3-1285 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4700																																																																																			
Xeon E3-1280 v3	4	8	3.6 GHz	4 GHz	8 MB	DDR3-1600	Yes																																																																																				
Xeon E3-1275 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																			
Xeon E3-1270 v3	4	8	3.5 GHz	3.9 GHz	8 MB	DDR3-1600	Yes																																																																																				
Xeon E3-1245 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																			
Xeon E3-1240 v3	4	8	3.4 GHz	3.8 GHz	8 MB	DDR3-1600	Yes																																																																																				
Xeon E3-1230 v3	4	8	3.3 GHz	3.7 GHz	8 MB	DDR3-1600	Yes																																																																																				
Xeon E3-1225 v3	4	4	3.2 GHz	3.6 GHz	8 MB	DDR3-1600	Yes	Intel HD Graphics P4600																																																																																			
Xeon E3-1220 v3	4	4	3.1 GHz	3.5 GHz	8 MB	DDR3-1600	Yes																																																																																				
Memory type	1600MHz UDIMM, DDR3, ECC, 2-channel capable; 2GB, 4GB, and 8GB ECC UDIMMs are available																																																																																										
Memory DIMM sockets	Four 240-pin DIMM sockets																																																																																										
Memory capacity	Up to 32GB (8GBx4)																																																																																										
Memory protection	ECC																																																																																										
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs																																																																																										
Onboard SATA controller	Onboard ThinkServer RAID 100 SATA controller in chipset, SATA 6.0Gb/s, RAID 0, 1, 5, 10 support																																																																																										
Discreted SATA/SAS controller (optional)	<p>Supports the following:</p> <ul style="list-style-type: none">ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support; optional upgrade key for ThinkServer RAID 500 adapter, add RAID 5, 50 supportThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support; optional Intelligent Battery Backup Unit (iBBU08) for ThinkServer RAID 700 adapter <p><i>Notes:</i> RAID 50 and 60 are supported on 8 hard drive bays models only</p>																																																																																										
Drive bays	<p>Supports two 5.25" optical bays, up to two optical drives (up to one optical on models with onboard SATA controller); supports up to eight hard drive bays, one of the following are supported:</p> <ul style="list-style-type: none">4 x 3.5" DC: Four 3.5" hard drive bays, no hot-swap, direct cable (onboard RAID 100 controller, SATA only)4 x 3.5" HS: Four 3.5" hot-swap hard drive bays (onboard RAID 100 controller for SATA, discrete RAID adapter for SATA/SAS)8 x 3.5" HS: Eight 3.5" hot-swap hard drive bays (needs discreted RAID adapter, supports SATA/SAS)8 x 2.5" HS: Eight 2.5" hot-swap hard drive bays (needs discreted RAID adapter, supports SATA/SAS) <div></div> <p>8 x 2.5" hot-swap 4 x 3.5" hot-swap 8 x 3.5" hot-swap</p> <p><i>Notes:</i> Hard drive bays are behind front cover</p>																																																																																										

ThinkServer TS440 Platform Specifications - II of III

Components	Specification		
Optical	Supports DVD±RW or DVD ROM, 1.6" high, SATA interface		
Graphics	<ul style="list-style-type: none">Integrated Intel HD Graphics on Xeon E3-12X5 v3 processors, uses main memory, works along with discrete graphics to support multi-display, enables VGA connector on rear (detailed information please see Rear ports section)Also supports the following optional discrete graphics adapters:<ul style="list-style-type: none">NVIDIA NVS 300, PCIe x1 adapter, 512MB		
Front ports	Two USB 3.0 (blue)		
Rear ports	One VGA for models with Intel HD Graphics, two USB 2.0, four USB 3.0 (blue), one serial (9-pin), one ethernet (RJ-45)		
Add-on ports (optional)	Supports the following: <ul style="list-style-type: none">Single Parallel Port PCI Adapter (1xParallel)Single Serial Port PCI Adapter (1xSerial)Dual Serial Ports PCI Adapter (2xSerial PCI)Dual Serial Ports PCIe Adapter(2xSerial PCIe)		
Expansion Slots	Slot 1: half-length, full-height, PCIe 3.0 x16 (near CPU) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x16 (x4 elec) Slot 4: half-length, full-height, PCI 2.3		
Onboard Ethernet	One onboard gigabit ethernet, Intel I217		
Discrete Ethernet (optional)	Supports the following: <ul style="list-style-type: none">Intel Gigabit CT Desktop Adapter (1xGbE, RJ-45)Intel Ethernet Server Adapter I350-T2 (2xGbE, RJ-45)Intel Ethernet Server Adapter I350-T4 (4xGbE, RJ-45)		
Keyboard/mouse	None (use USB port)		
Power supply	Supports one of the follwing, depending on models: <ul style="list-style-type: none">One fixed 450 watts, universal, 80 PLUS® Platinum qualifiedUp to two redundant 450 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies		
Security	<ul style="list-style-type: none">Security chip: ST33ZP24AR28PVSP for TPM function, TCG 1.2-compliantAdministrator passwordUser passwordFront panel key lockBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (front or all)		
Mechanical	<ul style="list-style-type: none">Tower, business black color, metal caseW x H (without foot) x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm61.7 lb (28kg) max configurationRack-mountable to 5U		
Serviceability	<ul style="list-style-type: none">Toolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front icons		
Environmental certifications	<ul style="list-style-type: none">GREENGUARD® certifiedEnergy Star Server 1.1 qualifiedRoHS-compliant		
EMC	FCC Class A		
240VA	Supports		
Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)		
Temperature - non operating (no package)	-10 °C to 60 °C		
Temperature - non operating (with package)	-40 °C to 70 °C		
Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)		
Humidity - operating	10%~80%, non-condensing		
Humidity - non operating (no package)	10%~90%, non-condensing		
Humidity - non operating (with package)	10%~90%, non-condensing		
Acoustic noise (idle/working mode)	Category	Mainstream Configuration	Full Configuration
	CPU	Xeon	Xeon
	Optical Drive	DVD-ROM	DVD-ROM
	HDD Controller	onboard SATA	SAS Controller
	HDD Bays	4 x 3.5" SATA (direct cable)	8 x 3.5" SAS (hot-swap)
	HDD	4x 1TB SATA	8x 600GB SAS
	Memory	1 x 2GB UDIMM ECC	4 x 4GB UDIMM ECC
	PSU	Fixed	Redundant
	Management	Basic IPMI mgmt, reporting	Basic IPMI mgmt, reporting
	RAID	SATA RAID 0/1	SAS RAID 5
	Sound Pressure (operating)	40.5 dB(A)	42.0 dB(A)
	Sound Pressure (idle)	32.0 dB(A)	38.0 dB(A)

ThinkServer TS440 Platform Specifications - III of III

Components	Specification
Warranty	1 or 3-year limited warranty, parts and labor, more services information see S-TS1 and S-TS3 sheet
Preloaded operating systems	<ul style="list-style-type: none">• Windows Server® 2012 Foundation• Windows Server 2012 Essentials• Windows Server 2012 Standard
Supported operating systems and virtualization software	<ul style="list-style-type: none">• Windows Server 2008 R2 Standard• Windows Server 2008 R2 Enterprise• Windows Server 2012 Datacenter• Windows Small Business Server 2011 Essentials• Windows Small Business Server 2011 Standard• Windows Small Business Server 2011 Premium Add-On• Red Hat Enterprise Linux 6.4• VMware ESXi 5.1 U1 (Discrete RAID controller, add-on ethernet controller, and Intel Xeon E3-12x5 v3 processors are needed) <p>Notes:</p> <ol style="list-style-type: none">1. Supported only, no preloaded models2. For latest VMware compatibility list for ThinkServer, please see http://www.vmware.com/resources/compatibility/search.php3. For latest Red Hat compatibility list for ThinkServer, please see https://hardware.redhat.com/4. These supported operating systems are also supported by EasyStartup

ThinkServer TS440 Optional Configurations

Memory	
ThinkServer 2GB DDR3L-1600MHz (1RX8) ECC UDIMM	0C19498
ThinkServer 4GB DDR3L-1600MHz (1RX8) ECC UDIMM	0C19499
ThinkServer 8GB DDR3L-1600MHz (2RX8) ECC UDIMM	0C19500
Disk Drive	
ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19501
ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19502
ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19503
ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19504
ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hard Drive	0C19505
ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive	0A89473
ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive	0A89474
ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive	0A89475
ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive	0A89477
ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive	0C19520
ThinkServer 2.5" 300GB 10K SAS 6Gbps Hot Swap Hard Drive	67Y2619
ThinkServer 2.5" 600GB 10K SAS 6Gbps Hot Swap Hard Drive	67Y2621
ThinkServer 2.5" 900GB 10K SAS 6Gbps Hot Swap Hard Drive	0A89409
ThinkServer 2.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive	0C19494
ThinkServer 2.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive	0C19495
Connectivity	
ThinkServer RAID 500 Adapter II	0A89464
ThinkServer RAID 500 Upgrade Key for Advanced RAID	0A89407
ThinkServer RAID 700 Adapter II	0A89463
ThinkServer RAID 700 Battery	67Y2647
Connectivity	
ThinkServer 1Gbps Ethernet I350-T2 Server Adapter by Intel	0C19506
ThinkServer 1Gbps Ethernet I350-T4 Server Adapter by Intel	0C19507
Parallel/Serial Port Adapter	
ThinkServer Single Parallel Port PCI Adapter	0C19508
ThinkServer Single Serial Port PCI Adapter	0C19509
ThinkServer Dual Serial Port PCI Adapter	0C19510
ThinkServer Dual Serial Port PCIe Adapter	0C19511
Graphics	
ThinkServer 512MB NVS 300 PCIe x1 Graphic Adapter by NVIDIA	0C19528
3.5" Hard Drive Conversion Kit	
ThinkServer 3.5" HDD to 5.25" Tray Convertor Kit	0C19514
ThinkServer 3.5" HDD to 5.25" Tray Convertor with Slim ODD Kit	0C19529
Tower to Rack Shelf Conversion Kit	
ThinkServer Tower to Rack Shelf Conversion Kit	0C19515
Redundant Power Supply	
ThinkServer 450W Gold Hot Swap Redundant Power Supply	67Y2625

For more information on server accessories, please visit:

www.lenovo.com/support/accessories

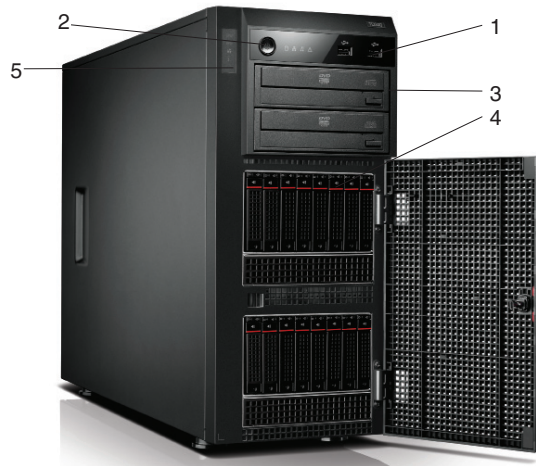
www.lenovo.com/support/thinkserveraccessories

www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

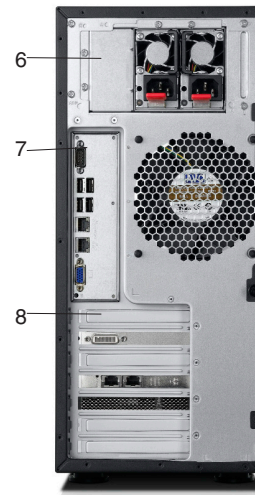
Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkServer TD340 Overview



Front view

1. Front I/O: 2 USB 2.0
2. Power Button
3. Two 5.25" optical drive bays
4. 16 x 2.5" hot-swap drive bays
(on selected models,
also supports one of the following:
4 x 3.5" direct cable bays,
or 4 x 3.5" hot-swap bays,
or 8 x 3.5" hot-swap bays,
or 8 x 2.5" hot-swap bays)
5. Intelligent Diagnostics Module (optional)



Rear view

6. Hot-swap power supplies, 800W, 80 PLUS Gold
(on selected models, also supports one fixed
power supply, 625W, 80 PLUS Bronze)
7. Rear I/O: 4 USB 2.0
1 Serial (9-pin)
2 RJ-45 (one for dedicate/share
management)
1 VGA
8. Expansion slots*:
1 PCIe 3.0 x8 (*near rear I/O, 2nd CPU is needed*)
1 PCIe 3.0 x16
1 PCIe 3.0 x8 (*2nd CPU is needed*)
1 PCIe 3.0 x8 (*2nd CPU is needed*)
1 PCIe 3.0 x8 (*x4 elec*)
1 PCI
* Add-on ethernet adapter, RAID adapter,
and graphics adapter are optional

Internal

- Two LGA1356 sockets, supports up to two processors from Intel Xeon E5-2400 v2 and E5-2400 families
- 12 DIMM sockets, supports up to 192GB ECC LV RDIMM or 48GB ECC LV UDIMM memory
- Up to 16 x 2.5" hard drive bays

Mechanical

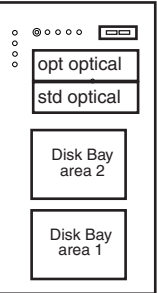
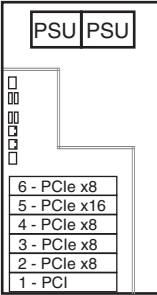
- Tower, business black color, metal case
- Rack-mountable to 5U
- W x H (without foot) x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm
- 57.32 lb (26kg) max configuration

ThinkServer TD340 TopSeller Models - 70B7 - I (January 2014)

Product Specifications Reference (PSREF)

Type-model	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Optical	Discrete ethernet	Intelligent Diagnostics (IDM)	ThinkServer Management Module Premium (Premium)	Tower to Rack kit	Discrete Graphics	TPM	Preloaded OS	Power Supply	Warranty (-year, on-site)
70B7002GUX	Xeon E5-2403 v2 4C/1.8GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	No	TMM Premium	No	No	TPM	No	1x800W Redundant	1
70B7002HUX	Xeon E5-2407 v2 4C/2.4GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	No	TMM Premium	No	No	TPM	No	1x800W Redundant	1
70B7002JUX	Xeon E5-2403 v2 4C/1.8GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002KUX	Xeon E5-2407 v2 4C/2.4GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002LUX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002MUX	Xeon E5-2430 v2 6C/2.5GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002NUX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3

- For detailed platform specifications, please see [ThinkServer TD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer TD340, please see [ThinkServer TD340 Optional Configurations sheets](#)
- For ThinkServer TD340 operating system and virtualization supportability, please see [ThinkServer TD340 Operating System and Virtualization Supportability Matrix sheets](#)
- For Lenovo services upgrade options for ThinkServer TD340, please see [ThinkServer TD340 Services Upgrade Options sheets](#)

Chipset	Intel C606 Chipset, two LGA1356 sockets for processors	Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified for models with 800 watts hot-swap PSU• Energy Star Server 1.1 qualified for models with 625 watts fixed PSU• RoHS-compliant
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor		
Memory capacity	Up to 192GB DDR3 LV RDIMM (16GB x 12), or up to 48GB DDR3 LV UDIMM (4GB x 12)	Front 	Mechanical <ul style="list-style-type: none">• Tower, rack-mountable to 5U via optional conversion kit (<i>Conversion kit is not included in model</i>)• 7.68" W x 23.4" D x 16.9" H (<i>without foot</i>)• 195mm W x 595mm D x 430mm H (<i>without foot</i>)• 57.3 lb (26kg) max configuration
Memory protection	ECC, memory mirroring, memory sparing		
RAID support	Supports one of the following, depending on models: RAID 100: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 300: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 500: RAID 0, 1, 10 standard, optional upgrade key for RAID 5, 50 RAID 700: RAID 0, 1, 10, 5, 50, 6, 60 standard, 512MB cache, optional intelligent Battery Backup Unit RAID 710: RAID 0, 1, 10, 5, 50, 6, 60 standard, 1GB cache, optional CacheVault flash cache with super capacitor/CacheCade Pro 2.0/FastPath key <i>*RAID 50, 60 are functional on 8 or 16 disk bay models only, RAID100 supports SATA drives only</i>	Rear*** 	Disk bay Configurations Supports one of the following, depending on models: <ul style="list-style-type: none">• 4 x 3.5" non-hot swap SATA disk bays (<i>uses Disk bay area 1</i>)• 4 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>)• 8 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>)• 8 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>)• 16 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>)
Optical drive (optional)	Supports two half-height 5.25" optical bays, up to two optical drives		
Onboard network	Two Gigabit Ethernet port via two Intel 82574L, either port can work as dedicate/share management (via BIOS setting)		Expansion Slots Up to six expansion slots**: Slot 1: half-length, full-height, 32-bit PCI 2.3 Slot 2: half-length, full-height, PCIe 3.0 x8 (<i>x4 elec</i>) Slot 3: half-length, full-height, PCIe 3.0 x8 Slot 4: half-length, full-height, PCIe 3.0 x8 Slot 5: half-length, full-height, PCIe 3.0 x16 Slot 6: half-length, full-height, PCIe 3.0 x8 (<i>near CPU</i>) <i>** Single processor models: Slot 1, 2, 5 are functional</i> <i>Dual processor models: All six slot are functional</i>
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2		
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) on selected models, IDM LED lights indicate failing component category		Ports Front ports: Two USB 2.0 Rear ports: Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one for dedicate/share mgmt), one analog VGA DB-15 connector Internal USB: One internal USB port (Type A)
Systems management (TMM Premium is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Front control panel LEDs shows the status of power, hard drive activity, network, system• ThinkServer EasyStartup/EasyManage/EasyUpdate		
Power supply	Supports one of the follwing, depending on models: <ul style="list-style-type: none">• One fixed 625 watts, universal, 80 PLUS Bronze qualified• Up to two redundant 800 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies	*** Some models: one 625W fixed power supply	
Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models		

See footnotes for more detailed information
Model(s) announced January 21, 2014

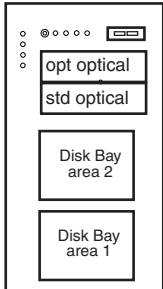
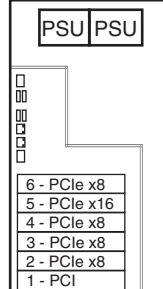
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(70B7-1) February 2014

ThinkServer TD340 TopSeller Models - 70B7 - II (January 2014)

Product Specifications Reference (PSREF)

Type-model	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Optical	Discrete ethernet	Intelligent Diagnostics (IDM)	ThinkServer Management Module Premium (Premium)	Tower to Rack kit	Discrete Graphics	TPM	Preloaded OS	Power Supply	Warranty (-year, on-site)
70B7002PUX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002QUX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002RUX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002SUX	Xeon E5-2430 v2 6C/2.5GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002TUX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002UUX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002VUX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x3.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3

- For detailed platform specifications, please see [ThinkServer TD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer TD340, please see [ThinkServer TD340 Optional Configurations sheets](#)
- For ThinkServer TD340 operating system and virtualization supportability, please see [ThinkServer TD340 Operating System and Virtualization Supportability Matrix sheets](#)
- For Lenovo services upgrade options for ThinkServer TD340, please see [ThinkServer TD340 Services Upgrade Options sheets](#)

Chipset	Intel C606 Chipset, two LGA1356 sockets for processors	Environmental certifications	Energy Star Server 2.0 qualified for models with 800 watts hot-swap PSU Energy Star Server 1.1 qualified for models with 625 watts fixed PSU RoHS-compliant
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor		
Memory capacity	Up to 192GB DDR3 LV RDIMM (16GB x 12), or up to 48GB DDR3 LV UDIMM (4GB x 12)	Front 	Mechanical <ul style="list-style-type: none"> • Tower, rack-mountable to 5U via optional conversion kit (<i>Conversion kit is not included in model</i>) • 7.68" W x 23.4" D x 16.9" H (<i>without foot</i>) • 195mm W x 595mm D x 430mm H (<i>without foot</i>) • 57.3 lb (26kg) max configuration
Memory protection	ECC, memory mirroring, memory sparing		
RAID support	Supports one of the following, depending on models: RAID 100: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 300: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 500: RAID 0, 1, 10 standard, optional upgrade key for RAID 5, 50 RAID 700: RAID 0, 1, 10, 5, 50, 6, 60 standard, 512MB cache, optional intelligent Battery Backup Unit RAID 710: RAID 0, 1, 10, 5, 50, 6, 60 standard, 1GB cache, optional CacheVault flash cache with super capacitor/CacheCade Pro 2.0/FastPath key <i>*RAID 50, 60 are functional on 8 or 16 disk bay models only, RAID100 supports SATA drives only</i>	Rear*** 	Disk bay Configurations Supports one of the following, depending on models: <ul style="list-style-type: none"> • 4 x 3.5" non-hot swap SATA disk bays (<i>uses Disk bay area 1</i>) • 4 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>) • 8 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>) • 8 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>) • 16 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>)
Optical drive (optional)	Supports two half-height 5.25" optical bays, up to two optical drives		
Onboard network	Two Gigabit Ethernet port via two Intel 82574L, either port can work as dedicate/share management (via BIOS setting)	Expansion Slots Up to six expansion slots**: Slot 1: half-length, full-height, 32-bit PCI 2.3 Slot 2: half-length, full-height, PCIe 3.0 x8 (<i>x4 elec</i>) Slot 3: half-length, full-height, PCIe 3.0 x8 Slot 4: half-length, full-height, PCIe 3.0 x8 Slot 5: half-length, full-height, PCIe 3.0 x16 Slot 6: half-length, full-height, PCIe 3.0 x8 (<i>near CPU</i>) <i>** Single processor models: Slot 1, 2, 5 are functional</i> <i>Dual processor models: All six slot are functional</i>	Ports Front ports: Two USB 2.0 Rear ports: Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one for dedicate/share mgmt), one analog VGA DB-15 connector Internal USB: One internal USB port (Type A)
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2		
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) on selected models, IDM LED lights indicate failing component category	*** Some models: one 625W fixed power supply	
Systems management (TMM Premium is optional)	<ul style="list-style-type: none"> • Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions • Front control panel LEDs shows the status of power, hard drive activity, network, system • ThinkServer EasyStartup/EasyManage/EasyUpdate 		
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> • One fixed 625 watts, universal, 80 PLUS Bronze qualified • Up to two redundant 800 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies 		
Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models		

See footnotes for more detailed information
Model(s) announced January 21, 2014

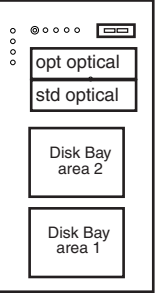
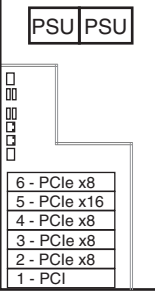
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(70B7-2) February 2014

ThinkServer TD340 TopSeller Models - 70B7 - III (January 2014)

Product Specifications Reference (PSREF)

Type-model	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Optical	Discrete ethernet	Intelligent Diagnostics (IDM)	ThinkServer Management Module Premium (Premium)	Tower to Rack kit	Discrete Graphics	TPM	Preloaded OS	Power Supply	Warranty (-year, on-site)
70B7002WUX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x2.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002XUX	Xeon E5-2430 v2 6C/2.5GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x2.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B7002YUX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x2.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B70030UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x2.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B70031UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8x2.5" HS (SATA/SAS)	RAID300	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B70032UX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	16x2.5" HS (SATA/SAS)	RAID700	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B70033UX	Xeon E5-2430 v2 6C/2.5GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	16x2.5" HS (SATA/SAS)	RAID700	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3

- For detailed platform specifications, please see [ThinkServer TD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer TD340, please see [ThinkServer TD340 Optional Configurations sheets](#)
- For ThinkServer TD340 operating system and virtualization supportability, please see [ThinkServer TD340 Operating System and Virtualization Supportability Matrix sheets](#)
- For Lenovo services upgrade options for ThinkServer TD340, please see [ThinkServer TD340 Services Upgrade Options sheets](#)

Chipset	Intel C606 Chipset, two LGA1356 sockets for processors	Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified for models with 800 watts hot-swap PSU• Energy Star Server 1.1 qualified for models with 625 watts fixed PSU• RoHS-compliant
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor		
Memory capacity	Up to 192GB DDR3 LV RDIMM (16GB x 12), or up to 48GB DDR3 LV UDIMM (4GB x 12)	Front 	Mechanical <ul style="list-style-type: none">• Tower, rack-mountable to 5U via optional conversion kit (<i>Conversion kit is not included in model</i>)• 7.68" W x 23.4" D x 16.9" H (<i>without foot</i>)• 195mm W x 595mm D x 430mm H (<i>without foot</i>)• 57.3 lb (26kg) max configuration
Memory protection	ECC, memory mirroring, memory sparing		
RAID support	Supports one of the following, depending on models: RAID 100: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 300: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 500: RAID 0, 1, 10 standard, optional upgrade key for RAID 5, 50 RAID 700: RAID 0, 1, 10, 5, 50, 6, 60 standard, 512MB cache, optional intelligent Battery Backup Unit RAID 710: RAID 0, 1, 10, 5, 50, 6, 60 standard, 1GB cache, optional CacheVault flash cache with super capacitor/CacheCade Pro 2.0/FastPath key <i>*RAID 50, 60 are functional on 8 or 16 disk bay models only, RAID100 supports SATA drives only</i>		Disk bay Configurations Supports one of the following, depending on models: <ul style="list-style-type: none">• 4 x 3.5" non-hot swap SATA disk bays (<i>uses Disk bay area 1</i>)• 4 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>)• 8 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>)• 8 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>)• 16 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>)
Optical drive (optional)	Supports two half-height 5.25" optical bays, up to two optical drives		
Onboard network	Two Gigabit Ethernet port via two Intel 82574L, either port can work as dedicate/share management (via BIOS setting)	Rear***	Expansion Slots Up to six expansion slots**: Slot 1: half-length, full-height, 32-bit PCI 2.3 Slot 2: half-length, full-height, PCIe 3.0 x8 (<i>x4 elec</i>) Slot 3: half-length, full-height, PCIe 3.0 x8 Slot 4: half-length, full-height, PCIe 3.0 x8 Slot 5: half-length, full-height, PCIe 3.0 x16 Slot 6: half-length, full-height, PCIe 3.0 x8 (<i>near CPU</i>) <i>** Single processor models: Slot 1, 2, 5 are functional</i> <i>Dual processor models: All six slot are functional</i>
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2		
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) on selected models, IDM LED lights indicate failing component category	Ports Front ports: Two USB 2.0 Rear ports: Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one for dedicate/share mgmt), one analog VGA DB-15 connector Internal USB: One internal USB port (Type A)	Security features (TPM is optional) Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models
Systems management (TMM Premium is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Front control panel LEDs shows the status of power, hard drive activity, network, system• ThinkServer EasyStartup/EasyManage/EasyUpdate		
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none">• One fixed 625 watts, universal, 80 PLUS Bronze qualified• Up to two redundant 800 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies	*** Some models: one 625W fixed power supply	

See footnotes for more detailed information
Model(s) announced January 21, 2014

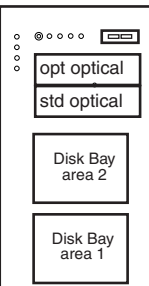
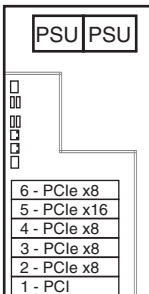
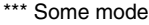
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ThinkServer TD340 TopSeller Models - 70B7 - IV (January 2014)

Product Specifications Reference (PSREF)

Type-model	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Optical	Discrete ethernet	Intelligent Diagnostics (IDM)	ThinkServer Management Module Premium (Premium)	Tower to Rack kit	Discrete Graphics	TPM	Preloaded OS	Power Supply	Warranty (-year, on-site)
70B70034UX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	16x2.5" HS (SATA/SAS)	RAID700	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B70035UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	16x2.5" HS (SATA/SAS)	RAID710	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3
70B70036UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	16x2.5" HS (SATA/SAS)	RAID710	Open	DVD±RW	No	IDM	TMM Premium	No	No	TPM	No	1x800W Redundant	3

- For detailed platform specifications, please see [ThinkServer TD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer TD340, please see [ThinkServer TD340 Optional Configurations sheets](#)
- For ThinkServer TD340 operating system and virtualization supportability, please see [ThinkServer TD340 Operating System and Virtualization Supportability Matrix sheets](#)
- For Lenovo services upgrade options for ThinkServer TD340, please see [ThinkServer TD340 Services Upgrade Options sheets](#)

Chipset	Intel C606 Chipset, two LGA1356 sockets for processors	Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified for models with 800 watts hot-swap PSU• Energy Star Server 1.1 qualified for models with 625 watts fixed PSU• RoHS-compliant
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor		
Memory capacity	Up to 192GB DDR3 LV RDIMM (16GB x 12), or up to 48GB DDR3 LV UDIMM (4GB x 12)	Front 	Mechanical <ul style="list-style-type: none">• Tower, rack-mountable to 5U via optional conversion kit (<i>Conversion kit is not included in model</i>)• 7.68" W x 23.4" D x 16.9" H (<i>without foot</i>)• 195mm W x 595mm D x 430mm H (<i>without foot</i>)• 57.3 lb (26kg) max configuration
Memory protection	ECC, memory mirroring, memory sparing		
RAID support	Supports one of the following, depending on models: RAID 100: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 300: RAID 0, 1, 10 standard, optional upgrade key for RAID 5 RAID 500: RAID 0, 1, 10 standard, optional upgrade key for RAID 5, 50 RAID 700: RAID 0, 1, 10, 5, 50, 6, 60 standard, 512MB cache, optional intelligent Battery Backup Unit RAID 710: RAID 0, 1, 10, 5, 50, 6, 60 standard, 1GB cache, optional CacheVault flash cache with super capacitor/CacheCade Pro 2.0/FastPath key <i>*RAID 50, 60 are functional on 8 or 16 disk bay models only, RAID100 supports SATA drives only</i>		Disk bay Configurations Supports one of the following, depending on models: <ul style="list-style-type: none">• 4 x 3.5" non-hot swap SATA disk bays (<i>uses Disk bay area 1</i>)• 4 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>)• 8 x 3.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>)• 8 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1</i>)• 16 x 2.5" hot-swap SATA/SAS disk bays (<i>uses Disk bay area 1 and 2</i>)
Optical drive (optional)	Supports two half-height 5.25" optical bays, up to two optical drives		
Onboard network	Two Gigabit Ethernet port via two Intel 82574L, either port can work as dedicate/share management (via BIOS setting)	Rear***	Expansion Slots Up to six expansion slots**: Slot 1: half-length, full-height, 32-bit PCI 2.3 Slot 2: half-length, full-height, PCIe 3.0 x8 (<i>x4 elec</i>) Slot 3: half-length, full-height, PCIe 3.0 x8 Slot 4: half-length, full-height, PCIe 3.0 x8 Slot 5: half-length, full-height, PCIe 3.0 x16 Slot 6: half-length, full-height, PCIe 3.0 x8 (<i>near CPU</i>) ** Single processor models: Slot 1, 2, 5 are functional Dual processor models: All six slot are functional
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2		
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) on selected models, IDM LED lights indicate failing component category		Ports Front ports: Two USB 2.0 Rear ports: Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one for dedicate/share mgmt), one analog VGA DB-15 connector Internal USB: One internal USB port (Type A)
Systems management (TMM Premium is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Front control panel LEDs shows the status of power, hard drive activity, network, system• ThinkServer EasyStartup/EasyManage/EasyUpdate		
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none">• One fixed 625 watts, universal, 80 PLUS Bronze qualified• Up to two redundant 800 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies	*** Some models: one 625W fixed power supply	
Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models		

See footnotes for more detailed information
Model(s) announced January 21, 2014

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ThinkServer TD340 Relationship Model

Product Specifications Reference (PSREF)

List of ThinkServer TD340 Relationship models

Type-model	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Optical	Discrete ethernet	Intelligent Diagnostics (IDM)	ThinkServer Management Module Premium (Premium)	Tower to Rack kit	Discrete Graphics	TPM	Preloaded OS	Power Supply	Warranty (-year, on-site)
Model(s) announced January 21, 2014																
70B60002UX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	8GBx4 1600MHz LVRDIMM	4x3.5" HS (SATA/SAS)	RAID500 +Upgrade	4x2TB 3.5" SATA	DVD±RW	350T2	IDM	TMM Premium	No	No	TPM	No	2x800W Redundant	3
70B60003UX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	2nd	8GBx8 1600MHz LVRDIMM	8x3.5" HS (SATA/SAS)	RAID700	8x2TB 3.5" SAS	DVD±RW	350T2	IDM	TMM Premium	No	No	TPM	No	2x800W Redundant	3
70B60004UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	2nd	8GBx12 1600MHz LVRDIMM	16x2.5" HS (SATA/SAS)	RAID710 +CacheVault	8x300GB 2.5" SAS	DVD±RW	350T4	IDM	TMM Premium	No	No	TPM	No	2x800W Redundant	3

Note:

- For detailed platform specifications, please see [ThinkServer TD340 Platform Specifications](#) sheets
- For optional configurations of ThinkServer TD340, please see [ThinkServer TD340 Optional Configurations](#) sheets
- For ThinkServer TD340 operating system and virtualization supportability, please see [ThinkServer TD340 Operating System and Virtualization Supportability Matrix](#) sheets
- For Lenovo services upgrade options for ThinkServer TD340, please see [ThinkServer TD340 Services Upgrade Options](#) sheets

ThinkServer TD340 Platform Systems Specifications - I of II

Components	Specifications																
Mechanical	<ul style="list-style-type: none">Tower, rack-mountable to 5U via optional conversion kit7.68" W x 23.4" D x 16.9" H (without foot)195mm W x 595mm D x 430mm H (without foot)57.3 lb (26kg) max configuration																
Chipset	Intel C606 Chipset																
Processors	Two LGA1356 sockets, supports up to two processors from Intel Xeon E5-2400 v2 or Xeon E5-2400 families, the following processor options are supported:																
	<table><tr><th rowspan="2">Processor Number</th><th rowspan="2"># of Cores</th><th rowspan="2"># of Threads</th><th colspan="6">Processors Specifications*</th><th rowspan="2">Part Number</th></tr><tr><th>Clock Speed</th><th>Max Turbo Frequency</th><th>Cache</th><th>QPI Speed</th><th>Max TDP</th><th>Memory Speed</th></tr></table>	Processor Number	# of Cores	# of Threads	Processors Specifications*						Part Number	Clock Speed	Max Turbo Frequency	Cache	QPI Speed	Max TDP	Memory Speed
	Processor Number				# of Cores	# of Threads	Processors Specifications*						Part Number				
		Clock Speed	Max Turbo Frequency	Cache			QPI Speed	Max TDP	Memory Speed								
	Intel Xeon E5-2400 v2 Series																
	Xeon E5-2470 v2	10	20	2.4 GHz	3.2 GHz	25MB	8 GT/s	95W	DDR3-1600	0C19561							
	Xeon E5-2450L v2	10	20	1.7 GHz	2.1 GHz	25MB	7.2 GT/s	60W	DDR3-1600	0C19568							
	Xeon E5-2450 v2	8	16	2.5 GHz	3.3 GHz	20MB	8 GT/s	95W	DDR3-1600	0C19562							
	Xeon E5-2440 v2	8	16	1.9 GHz	2.4 GHz	20MB	7.2 GT/s	95W	DDR3-1600	0C19563							
	Xeon E5-2430L v2	6	12	2.4 GHz	2.8 GHz	15MB	7.2 GT/s	60W	DDR3-1600	0C19569							
	Xeon E5-2430 v2	6	12	2.5 GHz	3 GHz	15MB	7.2 GT/s	80W	DDR3-1600	0C19564							
	Xeon E5-2420 v2	6	12	2.2 GHz	2.7 GHz	15MB	7.2 GT/s	80W	DDR3-1600	0C19565							
	Xeon E5-2407 v2	4	4	2.4 GHz	2.4 GHz	10MB	6.4 GT/s	80W	DDR3-1333	0C19566							
	Xeon E5-2403 v2	4	4	1.8 GHz	1.8 GHz	10MB	6.4 GT/s	80W	DDR3-1333	0C19567							
	Intel Xeon E5-2400 Series																
Xeon E5-2420	6	12	1.9 GHz	2.4 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89456								
	<i>Notes:</i> All processors specifications is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/																
Memory type	1600MHz, LV UDIMM or LV RDIMM, DDR3, 3-channel per processor, 240-pin																
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor																
Memory capacity	Up to 192GB DDR3 LV RDIMM (16GB x 12) or up to 48GB DDR3 LV UDIMM (4GB x 12)																
Memory protection	ECC, memory mirroring, memory sparing																
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsMaximum memory operating speed are 1333MT/s on LV UDIMM modelsOver six DIMMs requires dual processorsMixing of LV UDIMM or LV RDIMM is not supported																
Disk bays configurations	Supports one of the following disk bay configurations: 4 x 3.5" non-hot swap disk bays, supports SATA non-hot swap hard drives 4 x 3.5" hot-swap Disk bays, supports SATA/SAS hot-swap hard drives or SSD drives 8 x 3.5" hot-swap Disk bays, supports SATA/SAS hot-swap hard drives or SSD drives 8 x 2.5" hot-swap Disk bays, supports SATA/SAS hot-swap hard drives or SSD drives 16 x 2.5" hot-swap Disk bays, supports SATA/SAS hot-swap hard drives or SSD drives																
RAID support	RAID adapter	Disk type	RAID support*	Cache	Transfer rates	Optional upgrades											
	RAID 100 (onboard)	SATA	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support											
	RAID 300 (onboard)	SATA/SAS	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support											
	RAID 500 (LSI 9240-8i)	SATA/SAS	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support											
	RAID 700 (LSI 9260-8i)	SATA/SAS	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)											
	RAID 710 (LSI 9270CV-8i)	SATA/SAS	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">optional CacheVault (CV) flash cache with super capacitoroptional CacheCade Pro 2.0optional FastPath key											
	*RAID 50, 60 are functional on 8 or 16 disk bay models only, RAID100 supports SATA drives only																
Optical drive (optional)	Supports two half-height 5.25" optical bays, up to two optical drives																
Onboard network	Two Gigabit Ethernet port via two Intel 82574L, either port can be set to dedicate/share management via BIOS																

ThinkServer TD340 Platform Systems Specifications - II of II

Components	Specifications		
Front ports	Two USB 2.0		
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one for dedicate/share mgmt), one analog VGA DB-15 connector		
Internal USB	One internal USB port (Type A)		
Expansion Slots	Up to six PCI-Express slots (only slot 1, 2, 5 are functional for single processor models): Slot 1: half-length, full-height, 32-bit PCI 2.3 Slot 2: half-length, full-height, PCIe 3.0 x8 (<i>x4 elec</i>) Slot 3: half-length, full-height, PCIe 3.0 x8 Slot 4: half-length, full-height, PCIe 3.0 x8 Slot 5: half-length, full-height, PCIe 3.0 x16 Slot 6: half-length, full-height, PCIe 3.0 x8 (<i>near CPU</i>)		
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear (<i>Maximum resolution: 1600x1200@60Hz</i>). Discrete NVIDIA NVS 300 graphics adapter is available on selected models		
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) on selected models, IDM LED lights indicate failing component category		
Systems management (TMM Premium is optional)	<ul style="list-style-type: none"> Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions Front control panel LEDs shows the status of power, hard drive activity, network, system ThinkServer EasyStartup/EasyManage/EasyUpdate 		
Security features (TPM is optional)	Power-on password/administrator password/Trusted Platform Module (TCG 1.2-compliant, optional)		
Power supply	Supports one of the following, depending on models: <ul style="list-style-type: none"> One fixed 625 watts, universal, 80 PLUS Bronze qualified Up to two redundant 800 watts, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies 		
Safety, environment, and certifications	Environmental certifications	<ul style="list-style-type: none"> Energy Star Server 2.0 qualified for models with 800 watts hot-swap PSU Energy Star Server 1.1 qualified for models with 625 watts fixed PSU RoHS-compliant 	
	EMC	FCC Class A, CSA, CE	
	240VA	Supports	
	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)	
	Temperature - non operating (no package)	-10 °C to 60 °C	
	Temperature - non operating (with package)	-40 °C to 60 °C	
	Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)	
	Humidity - operating	10%~80%, non-condensing	
	Humidity - non operating (no package)	8%~90%, non-condensing	
	Humidity - non operating (with package)	8%~90%, non-condensing	
	Acoustic noise (idle/working mode)	System Configuration	
		Category	Entry level High-end
		CPU	1 x CPU 2 x CPU
		Optical Drive	1 DVD-ROM 1 DVD-ROM
		Drive Bays	4 x 3.5" direct cable 8 x 3.5" hot-swap
		HDD	2 x 500GB 3.5" SATA 8 x 2TB 3.5" SAS
		Memory	2GB x 1 (LV UDIMM) 8GB x 12 (LV RDIMM)
		PSU	1 x 625 watts fixed 1 x 800 watts hot-swap
		RAID	RAID 1 RAID 5
		Expansion Adapters	No 1 x RAID 700 2 x Ethernet Adapters
		Sound Pressure (operating)	37.0 dB(A) 42.0 dB(A)
		Sound Pressure (idle)	35.0 dB(A) 38.0 dB(A)

ThinkServer TD340 Optional Configurations

Partial list of accessories supported on ThinkServer TD340

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at: bplocator.lenovo.com

Option Number	Option Description
Processors	
0A89456	Intel Xeon E5-2420 Processor Option for ThinkServer TD340
0C19561	Intel Xeon E5-2470 v2 Processor Option for ThinkServer TD340
0C19562	Intel Xeon E5-2450 v2 Processor Option for ThinkServer TD340
0C19563	Intel Xeon E5-2440 v2 Processor Option for ThinkServer TD340
0C19564	Intel Xeon E5-2430 v2 Processor Option for ThinkServer TD340
0C19565	Intel Xeon E5-2420 v2 Processor Option for ThinkServer TD340
0C19566	Intel Xeon E5-2407 v2 Processor Option for ThinkServer TD340
0C19567	Intel Xeon E5-2403 v2 Processor Option for ThinkServer TD340
0C19568	Intel Xeon E5-2450L v2 Processor Option for ThinkServer TD340
0C19569	Intel Xeon E5-2430L v2 Processor Option for ThinkServer TD340
Memory	
0C19499	ThinkServer 4GB DDR3L-1600MHz (1Rx8) ECC UDIMM
0C19500	ThinkServer 8GB DDR3L-1600MHz (2Rx8) ECC UDIMM
0C19533	ThinkServer 4GB DDR3L-1600MHz (1Rx8) RDIMM
0C19534	ThinkServer 8GB DDR3L-1600MHz (2Rx8) RDIMM
0C19535	ThinkServer 16GB DDR3L-1600MHz (2Rx4) RDIMM
Drives - 3.5"	
3.5" Cabled SATA Hard Drives	
0C19501	ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hard Drive
0C19502	ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hard Drive
0C19503	ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hard Drive
0C19504	ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hard Drive
0C19505	ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hard Drive
3.5" Hot Swap SATA Hard Drives	
0A89473	ThinkServer 500GB 3.5" 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive
0A89474	ThinkServer 1TB 3.5" 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive
0A89475	ThinkServer 2TB 3.5" 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive
0A89477	ThinkServer 3TB 3.5" 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive
0C19520	ThinkServer 4TB 3.5" 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive
3.5" Hot Swap 7.2K SAS Hard Drives	
0C19530	ThinkServer 3.5" 1TB 7.2K SAS 6Gbps Hot Swap Hard Drive
0C19531	ThinkServer 3.5" 2TB 7.2K SAS 6Gbps Hot Swap Hard Drive
0C19532	ThinkServer 3.5" 3TB 7.2K SAS 6Gbps Hot Swap Hard Drive
3.5" Hot Swap 15K SAS Hard Drives	
67Y2616	ThinkServer 3.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive
4XB0F28644	ThinkServer 3.5" 600GB 15K SAS 6Gbps Hot Swap Hard Drive
3.5" Hot Swap SATA Solid State Drives	
0C19571	ThinkServer 2.5" 100GB MLC SATA Solid State Drive with 3.5" Kit
0C19572	ThinkServer 2.5" 200GB MLC SATA Solid State Drive with 3.5" Kit
0C19573	ThinkServer 2.5" 400GB MLC SATA Solid State Drive with 3.5" Kit
Drives - 2.5"	
2.5" Hot Swap SATA Hard Drives	
0C19495	ThinkServer 500GB 7.2K 2.5" Enterprise SATA 6Gbps Hot Swap Hard Drive
0C19496	ThinkServer 1TB 7.2K 2.5" Enterprise SATA 6Gbps Hot Swap Hard Drive
2.5" Hot Swap 10K SAS Hard Drives	
67Y2619	ThinkServer 300GB 2.5" 10K SAS 6Gbps Hot Swap Hard Drive
67Y2621	ThinkServer 600GB 2.5" 10K SAS 6Gbps Hot Swap Hard Drive
0A89409	ThinkServer 900GB 2.5" 10K SAS 6Gbps Hot Swap Hard Drive
2.5" Hot Swap SATA Solid State Drives	
0A89418	ThinkServer 2.5" 200GB MLC SATA Solid State Drive (HS)
0A89419	ThinkServer 2.5" 400GB MLC SATA Solid State Drive (HS)
0A89420	ThinkServer 2.5" 100GB MLC SATA Solid State Drive (HS)

Option Number	Option Description
RAID	
0A89422	ThinkServer RAID 300 Upgrade Key for Advanced RAID
0A89464	ThinkServer RAID 500 Adapter II
0A89407	ThinkServer RAID 500 Upgrade Key for Advanced RAID
0A89463	ThinkServer RAID 700 Adapter II
67Y2647	ThinkServer RAID 700 Battery
0C19489	ThinkServer RAID 710 Adapter
0C19490	ThinkServer RAID CacheVault Data Protection for RAID 710
0C19491	ThinkServer RAID FastPath Feature Upgrade Key for RAID 710
0C19492	ThinkServer RAID CacheCade Pro 2.0 Feature Upgrade Key for RAID 710
Ethernet	
0C19506	ThinkServer 1Gbps Ethernet I350-T2 Server Adapter
0C19507	ThinkServer 1Gbps Ethernet I350-T4 Server Adapter
0C19486	Lenovo 10Gbps Ethernet X520-DA2 Server Adapter (SPF+)
0C19487	Lenovo 10Gbps Ethernet X520-SR2 Server Adapter (Fibre)
0C19497	Lenovo 10Gbps Ethernet X540-T2 Server Adapter
0C19488	Lenovo 10Gbps Ethernet Fiber Module
HBA	
0C19476	ThinkServer LPe1250 Single Port 8Gb Fibre Channel HBA by Emulex
0C19478	ThinkServer LPe12002 Dual Port 8Gb Fibre Channel HBA by Emulex
0C19483	ThinkServer QLE8242-CU-CK Dual Port CNA by QLogic
0C19482	ThinkServer QLE2562 Dual Port 8Gb Fibre Channel HBA by QLogic
Redundant Power Supply	
4X20E54691	ThinkServer 800W Gold Hot Swap Redundant Power Supply for Tower
Other	
0C19515	ThinkServer Tower to Rack Shelf Conversion Kit
67Y2624	ThinkServer Management Controller Premium Upgrade
73P5220	Lenovo Preferred Pro Keyboard USB - US English 103P
06P4069	Lenovo Optical Mouse
Microsoft Windows Server ROK	
4XI0E51561	Windows Server 2012 R2 Standard ROK (2 CPU/2VMs)
4XI0E51562	Windows Server 2012 R2 Datacenter ROK (2 CPU)
4XI0E51563	Windows Server 2012 R2 Essentials ROK (1-2 CPU)
82972SM	Windows Server 2012 Standard ROK (2 CPU/2VMs)
82972DM	Windows Server 2012 Datacenter ROK (2 CPU)
82972EM	Windows Server 2012 Essentials ROK (1-2 CPU)

For more information on server accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkserveraccessories

www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkServer TD340 Operating System and Virtualization Supportability Matrix

List of operating system and virtualization software supported on ThinkServer TD340

Operating System/Virtualization	Certified	Support ROK	Supports EasyStartup	Preloaded
Windows Server 2008 x86 Edition				
Windows Server 2008 Standard Edition (x86)			•	
Windows Server 2008 Enterprise Edition (x86)			•	
Windows Server 2008 Datacenter Edition (x86)			•	
Windows Server 2008 x64 Edition				
Windows Server 2008 Standard Edition (x64) (Include Hyper-v)	•		•	
Windows Server 2008 Enterprise Edition (x64) (Include Hyper-v)	•		•	
Windows Server 2008 Datacenter Edition (x64) (Include Hyper-v)	•		•	
Windows Server 2008 R2 (x64) with SP1				
Windows Server 2008 Standard Edition R2 with SP1(Include Hyper-v)	•	•	•	
Windows Server 2008 Enterprise Edition R2 with SP1(Include Hyper-v)	•	•	•	
Windows Server 2008 Datacenter Edition R2 with SP1(Include Hyper-v)	•	•	•	
Windows Small Business Server 2011				
Windows Small Business Server 2011 Essentials	•		•	
Windows Small Business Server 2011 Standard	•	•	•	
Windows Small Business Server Premium Add-On (including Hyper-V)	•	•	•	
Windows Server 2012				
Windows Server 2012 Standard (Include Hyper-v)	•	•	•	•
Windows Server 2012 Datacenter (Include Hyper-v)	•	•	•	•
Windows Server 2012 Essentials	•	•	•	•
Windows Server 2012 R2				
Windows Server 2012 R2 Standard (Include Hyper-v)	•	•	•	•
Windows Server 2012 R2 Datacenter (Include Hyper-v)	•	•	•	•
Windows Server 2012 R2 Essentials	•	•	•	•
Windows Server 2012 R2 Hyper-V	•		•	
SUSE Linux Enterprise Server x86				
SUSE Linux Enterprise Server 10 sp4 (32 bit)			•	
SUSE Linux Enterprise Server 11 sp2 (32 bit)	•		•	
SUSE Linux Enterprise Server x64				
SUSE Linux Enterprise Server 10 sp4 (64 bit)			•	
SUSE Linux Enterprise Server 11 sp2 (64 bit)	•		•	
RedHat Enterprise Linux Server (RHEL) x86				
RedHat RHEL 5.9 (32 bit)	•		•	
RedHat RHEL 5.10 (32 bit)	•		•	
RedHat RHEL 6.4 (32 bit)	•		•	
RedHat RHEL 6.5 (32 bit)	•		•	
RedHat Enterprise Linux Server x64				
RedHat RHEL 5.9 (64 bit)	•		•	
RedHat RHEL 5.10 (64 bit)	•		•	
RedHat RHEL 6.4 (64 bit)	•		•	
RedHat RHEL 6.5 (64 bit)	•		•	
VMware x64				
Vmware ESXi 5.1 U1	•		•	•
Vmware ESXi 5.5	•		•	•
Citrix				
Citrix XenServer 6.1	•		•	
Citrix XenServer 6.02	•		•	

Note:

- For more information on ThinkServer operating system and virtualization software, please visit ThinkServer Software page: <http://shop.lenovo.com/us/en/servers/thinkserver/server-software.html>
- For ThinkServer operating system and virtualization software options, please visit ThinkServer OS and virtualization Options document: http://www.lenovo.com/images/products/server/pdfs/datasheets/ThinkServer_OS_&_Virtualization_Options_Datasheet.pdf

ThinkServer TD340 Services Upgrade Options

Partial list of Lenovo Services for ThinkServer TD340 models with 3-year onsite base warranty
For more information see: http://www.lenovo.com/services_warranty/us/en/lenovo-warranty.html

Upgrade Service Description	Part Number
Warranty	
3-year Onsite 24x7x4 Hour Response	5WS0F46876
3-year Onsite 24x7x8 Hour Response	5WS0F46919
3-year Onsite 9x5x4 Hour Response	5WS0F46920
4-year Onsite 24x7x4 Hour Response	5WS0F46867
4-year Onsite 24x7x8 Hour Response	5WS0F46846
4-year Onsite 9x5x4 Hour Response	5WS0F46907
4-year Onsite NBD	5WS0F46930
5-year Onsite 24x7x4 Hour Response	5WS0F46937
5-year Onsite 24x7x8 Hour Response	5WS0F46861
5-year Onsite 9x5x4 Hour Response	5WS0F46903
5-year Onsite NBD	5WS0F46922
Keep Your Drive (KYD) Service	
3-year KYD	5WS0F46823
3-year Onsite 24x7x4 Hour Response + KYD	5WS0F46821
3-year Onsite 24x7x4 Hour Response + KYD + Priority Support	5WS0F46868
3-year Onsite 24x7x8 Hour Response + KYD	5WS0F46819
3-year Onsite 9x5x4 Hour Response + KYD	5WS0F46873
4-year Onsite 24x7x4 Hour Response + KYD	5WS0F46941
4-year Onsite 24x7x4 Hour Response + KYD + Priority Support	5WS0F46850
4-year Onsite 24x7x8 Hour Response + KYD	5WS0F46946
4-year Onsite 9x5x4 Hour Response + KYD	5WS0F46858
4-year Onsite NBD + KYD	5WS0F46869
5-year Onsite 24x7x4 Hour Response + KYD	5WS0F46866
5-year Onsite 24x7x8 Hour Response + KYD	5WS0F46934
5-year Onsite 9x5x4 Hour Response + KYD	5WS0F46852
5-year Onsite NBD + KYD	5WS0F46865
Priority Technical Support	
3-year KYD + Priority Support	5WS0F46940
3-year Onsite 24x7x4 Hour Response + Priority Support	5WS0F46900
3-year Onsite 24x7x8 Hour Response + KYD + Priority Support	5WS0F46862
3-year Onsite 24x7x8 Hour Response + Priority Support	5WS0F46889
3-year Onsite 24x7x8 Hour Support + Priority Support	5WS0F46897
3-year Onsite 9x5x4 Hour Response + KYD + Priority Support	5WS0F46915
3-year Onsite 9x5x4 Hour Response + Priority Support	5WS0F46935
3-year Priority Support	5WS0E76471
4-year Onsite 24x7x4 Hour Response + Priority Support	5WS0F46886
4-year Onsite 24x7x8 Hour Response + KYD + Priority Support	5WS0F46854
4-year Onsite 9x5x4 Hour Response + KYD + Priority Support	5WS0F46887
4-year Onsite 9x5x4 Hour Response + Priority Support	5WS0F46921
4-year Onsite NBD + KYD + Priority Support	5WS0F46884
4-year Onsite NBD + Priority Support	5WS0F46931
5-year Onsite 24x7x4 Hour Response + KYD + Priority Support	5WS0F46928
5-year Onsite 24x7x4 Hour Response + Priority Support	5WS0F46933
5-year Onsite 24x7x8 Hour Response + KYD + Priority Support	5WS0F46847
5-year Onsite 24x7x8 Hour Response + Priority Support	5WS0F46881
5-year Onsite 9x5x4 Hour Response + KYD + Priority Support	5WS0F46878
5-year Onsite 9x5x4 Hour Response + Priority Support	5WS0F46917
5-year Onsite NBD + KYD + Priority Support	5WS0F46926
5-year Onsite NBD + Priority Support	5WS0F46853
5-year Priority Support	5WS0E77173
5-year Onsite NBD + KYD + Priority Support	5PS0F15388
5-year Onsite NBD + Priority Support	5WS0F15463
5-year Priority Support	5WS0E77173

Upgrade Service Description	Part Number
Post Warranty	
1-year Onsite 24x7x4 Hour Response	5WS0F46814
1-year Onsite 24x7x4 Hour Response + KYD	5WS0F46817
1-year Onsite 24x7x4 Hour Response + KYD + Priority Support	5WS0F46828
1-year Onsite 24x7x4 Hour Response + Priority Support	5WS0F46831
1-year Onsite 24x7x8 Hour Response	5WS0F46822
1-year Onsite 24x7x8 Hour Response + KYD	5WS0F46825
1-year Onsite 24x7x8 Hour Response + KYD	5WS0F46838
1-year Onsite 24x7x8 Hour Response + Priority Support	5WS0F46842
1-year Onsite 9x5x4 Hour Response	5WS0F46833
1-year Onsite 9x5x4 Hour Response + KYD	5WS0F46834
1-year Onsite 9x5x4 Hour Response + KYD + Priority Support	5WS0F46848
1-year Onsite 9x5x4 Hour Response + Priority Support	5WS0F46849
1-year Onsite NBD	5WS0F46856
1-year Onsite NBD + KYD	5WS0F46845
1-year Onsite NBD + KYD + Priority Support	5WS0F46893
TopSeller Priority (TopSeller models only)	
3-year Onsite 24x7x4 Hour Response	5WS0F46918
3-year Onsite 9x5x4 Hour Response	5WS0F46924
4-year Onsite NBD	5WS0F46929
3-year Onsite 24x7x4 Hour Response + Priority Support	5WS0F46870
3-year Onsite 9x5x4 Hour Response + Priority Support	5WS0F46879
3-year Priority Support	5WS0E76457
4-year Priority Support	5WS0E76482

Note:

24x7x4: 4 Hour Onsite Response Time in 24x7 Service Window (requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.
- Best coverage for business critical work loads

9x5x4: 4 Hour Onsite Response Time in 9x5 Service Window (requires Location Activation)

- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.

24x7x8: 8 Hour Onsite Response Time in 24x7 Service Window (requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 8 hours.

Priority Technical Support

Lenovo's Priority Technical Support provides direct access to an advanced level technician supporting all of hardware, operating system and software needs related to server issues, available 24 hours a day, 7 days a week.

Keep Your Drive (KYD) Service

Retain drive (hard drive or SSD) and confidential data if the drive must be replaced.

To confirm if 4hr services are available in a specified location, please use ThinkServer

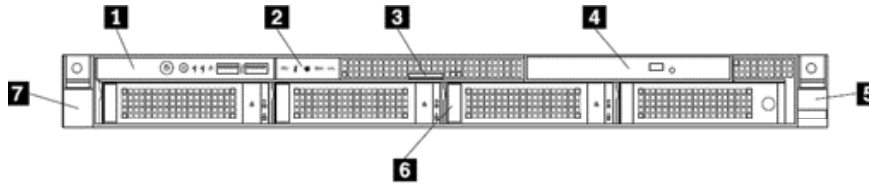
Service Availability Tool: http://www.lenovo.com/services_warranty/us/en/locator.html

Once purchased, to activate the location of your 4hr/8hr ThinkServer Service, please use ThinkServer Service Activation page: <http://www.lenovo.com/activation>

ThinkServer RD340 Overview

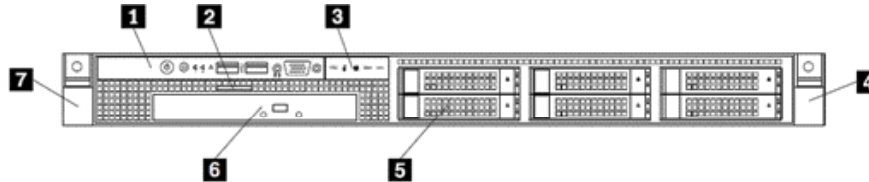
Front view - ThinkServer RD340 supports the following disk bay configurations:

ThinkServer RD340 with 4 x 3.5" Disk Drive Bays



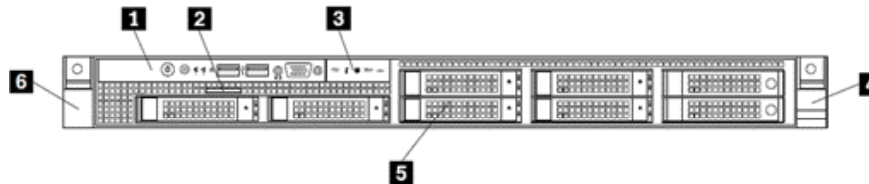
1. Front panel
 - Power Button with LED
 - ID button with LED
 - 2 Network interface status LEDs
 - System error LED
 - 2 USB 2.0
2. Intelligent Diagnostics Module (IDM basic only, optional)
3. Pull-out information card
4. Slim optical drive (optional)
5. Rack handle (right)
6. 4 x 3.5" hot-swap disk drive bays
7. Rack handle (left)

ThinkServer RD340 with 6 x 2.5" Disk Drive Bays



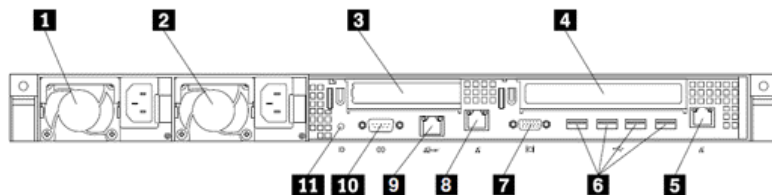
1. Front panel
 - Power Button with LED
 - ID button with LED
 - 2 Network interface status LEDs
 - System error LED
 - 2 USB 2.0
 - 1 VGA
2. Pull-out information card
3. Intelligent Diagnostics Module (IDM basic only, optional)
4. Rack handle (right)
5. 6 x 2.5" hot-swap disk drive bays
6. Slim optical drive (optional)
7. Rack handle (left)

ThinkServer RD340 with 8 x 2.5" Disk Drive Bays



1. Front panel
 - Power Button with LED
 - ID button with LED
 - 2 Network interface status LEDs
 - System error LED
 - 2 USB 2.0
 - 1 VGA
2. Pull-out information card
3. Intelligent Diagnostics Module (IDM basic only, optional)
4. Rack handle (right)
5. 8 x 2.5" hot-swap disk drive bays
6. Rack handle (left)

Rear view



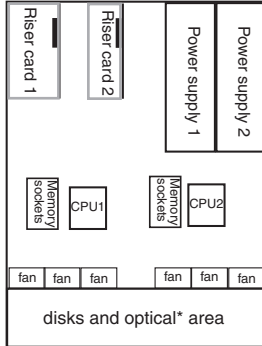
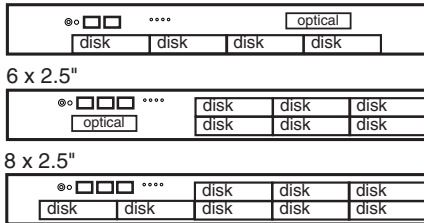
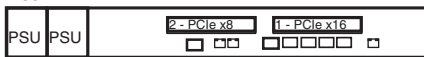
1. Hot-swap redundant power supply 2 (optional)
2. Hot-swap redundant power supply 1
3. Low profile PCI Express slot by riser card 2
4. PCI Express slot by riser card 1
5. Ethernet 2 (RJ-45)
6. Four USB 2.0
7. VGA DB-15 connector
8. Ethernet 1 (RJ-45)
9. Dedicate/share management connector (RJ-45)
10. Serial
11. ID LED

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AB0004US	<i>Xeon E5-2407 v2 4C/2.4GHz/10MB/1333MHz</i>	2nd	8GBx12 1600MHz LVRDIMM	4X3.5" HS	RAID710 +CacheVault +CacheCade	2x400GB SSD(RAID1,cache) +2x500GB 3.5" SATA(RAID0)	DVD±RW	350T2	No	iKVM	Cable	1	TPM	2012 Standard	3
70AB0005UX	Xeon E5-2403 v2 4C/1.8GHz/10MB/1333MHz	No	4GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0006UX	Xeon E5-2407 v2 4C/2.4GHz/10MB/1333MHz	No	4GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0008UX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	4GBx2 1600MHz LVRDIMM	4X3.5" HS	RAID300 +upgrade	Open	DVD±RW	No	No	iKVM	No	1	TPM	No	3
70AB0009UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	4GBx4 1600MHz LVRDIMM	4X3.5" HS	RAID700 +Battery	Open	DVD±RW	No	No	iKVM	No	1	TPM	No	3
70AB001TUX	Xeon E5-2403 v2 4C/1.8GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB001UUX	Xeon E5-2407 v2 4C/2.4GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support*		RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades					
		RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support					
		RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
		RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
		RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key					
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management										
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant										

Top									
									
* Slim optical bay is not available on 8 x 2.5" models									
Expansion Slots:									
Riser card 1 for slot 1, riser card 2 for slot 2									
Slot 1: half-length, full-height, PCIe 3.0 x16									
Slot 2: Low Profile, PCIe 3.0 x8**									
**x4 elec for single processor model, x8 elec for dual processors model									
Front: Supports the following disk bay configurations:									
4 x 3.5"									
									
Rear									
									
Front/rear Ports:									
Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0									
Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA									

See footnotes for more detailed information
Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AB001VUX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB001WUX	Xeon E5-2430 v2 6C/2.5GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB001XUX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB001YUX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0020UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID300	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0021UX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID500	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0022UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID500	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support*		RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades					
		RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support					
		RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
		RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
		RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key					
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management										
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/i350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant										

Riser card 1

Riser card 2

Power supply 1

Power supply 2

Memory sockets

CPU1

Memory sockets

CPU2

fan

fan

fan

fan

fan

fan

disks and optical* area

* Slim optical bay is not available on 8 x 2.5" models

Expansion Slots:

Riser card 1 for slot 1, riser card 2 for slot 2
Slot 1: half-length, full-height, PCIe 3.0 x16
Slot 2: Low Profile, PCIe 3.0 x8**
**x4 elec for single processor model, x8 elec for dual processors model

Front/rear Ports:

Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0
Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA

Front: Supports the following disk bay configurations:

4 x 3.5"

6 x 2.5"

8 x 2.5"

Rear

* Slim optical bay is not available on 8 x 2.5" models

Expansion Slots:

Riser card 1 for slot 1, riser card 2 for slot 2
Slot 1: half-length, full-height, PCIe 3.0 x16
Slot 2: Low Profile, PCIe 3.0 x8**

** x4 elec for single processor model,
x8 elec for dual processors model

Front/rear Ports:

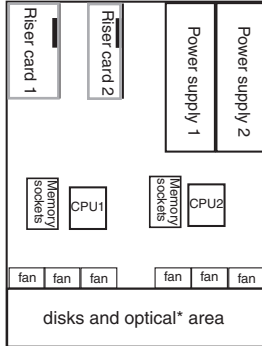
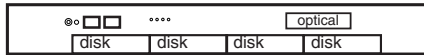
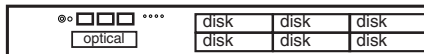
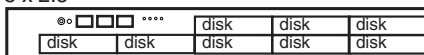
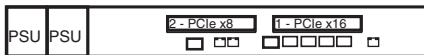
Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models),
2 USB 2.0
Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45),
1 RJ-45 (dedicate/share mgmt), 1 VGA

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AB0023UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID500	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0024UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID700	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0025UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID700	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0026UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID710	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0027UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID710	Open	DVD±RW	No	No	IPMI	No	1	TPM	No	3
70AB0028UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID710	Open	DVD±RW	No	No	iKVM	No	1	TPM	No	3
70AB0029UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	4X3.5" HS	RAID710	Open	DVD±RW	No	No	iKVM	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support*		RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades					
		RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support					
		RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
		RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
		RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key					
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management										
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/i350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant										

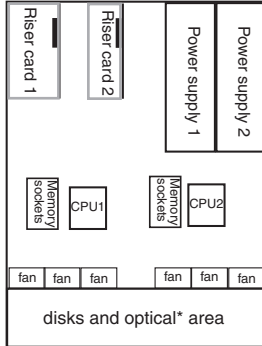
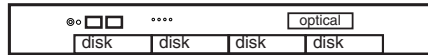
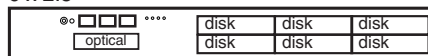
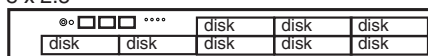
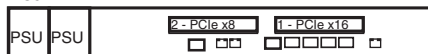
Top									
									
<i>* Slim optical bay is not available on 8 x 2.5" models</i>									
Expansion Slots:									
Riser card 1 for slot 1, riser card 2 for slot 2									
Slot 1: half-length, full-height, PCIe 3.0 x16									
Slot 2: Low Profile, PCIe 3.0 x8**									
<i>** x4 elec for single processor model, x8 elec for dual processors model</i>									
Front: Supports the following disk bay configurations:									
4 x 3.5"									
									
6 x 2.5"									
									
8 x 2.5"									
									
Rear									
									
Front/rear Ports:									
Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0									
Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA									

See footnotes for more detailed information
Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AB002AUX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	2nd	8GBx8 1600MHz LVRDIMM	4X3.5" HS	RAID300 +upgrade	4x1TB 3.5" SATA	DVD±RW	350T2	No	iKVM	No	1	TPM	No	3
70AB002BUX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	2nd	16GBx8 1600MHz LVRDIMM	4X3.5" HS	RAID500 +upgrade	4x1TB 3.5" SAS	DVD±RW	350T4	No	iKVM	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models																												
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies																												
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)																												
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant																												
RAID support*	<table><thead><tr><th>RAID adapter</th><th>RAID support</th><th>Cache</th><th>Transfer rates</th><th>Optional upgrades</th></tr></thead><tbody><tr><td>RAID 300 (onboard)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5 support</td></tr><tr><td>RAID 500 (LSI 9240-8i)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5, 50 support</td></tr><tr><td>RAID 700 (LSI 9260-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>512MB</td><td>6Gb/s</td><td>optional intelligent Battery Backup Unit (iBBU08)</td></tr><tr><td>RAID 710 (LSI 9270CV-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>1GB</td><td>6Gb/s</td><td><ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key</td></tr></tbody></table>					RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key	Top 				
RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades																															
RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support																															
RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support																															
RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)																															
RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key																															
* RAID 50, 60 are supported on 8 x 2.5" disk bay models only						Front: Supports the following disk bay configurations: 4 x 3.5" 																													
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed					6 x 2.5" 																													
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management					8 x 2.5" 																													
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/i350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2					Rear 																													
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category					Expansion Slots: Riser card 1 for slot 1, riser card 2 for slot 2 Slot 1: half-length, full-height, PCIe 3.0 x16 Slot 2: Low Profile, PCIe 3.0 x8** <small>**x4 elec for single processor model, x8 elec for dual processors model</small>																													
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate					Front/rear Ports: Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0 Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA																													
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant																																		

* Slim optical bay is not available on 8 x 2.5" models

Expansion Slots:

Riser card 1 for slot 1, riser card 2 for slot 2
Slot 1: half-length, full-height, PCIe 3.0 x16
Slot 2: Low Profile, PCIe 3.0 x8**

** x4 elec for single processor model,
x8 elec for dual processors model

Front/rear Ports:

Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models),
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Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45),
1 RJ-45 (dedicate/share mgmt), 1 VGA

ThinkServer RD340 (70AC) - TopSeller - January 2014

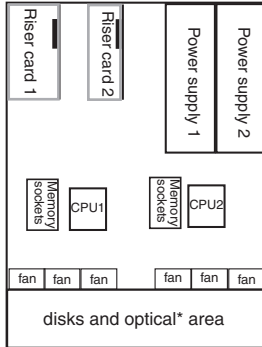
Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AC0000US	Xeon E5-2430L v2 6C/2.4GHz/15MB/1600MHz	2nd	16GBx12 1600MHz LVRDIMM	6X2.5" HS	RAID710 +CacheVault +FastPath	4x400GB SSD(RAID6) +2x400GB SSD(RAID0)	DVD±RW	350T2	No	iKVM	Cable	1	TPM	2012 Standard	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support*		RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades					
		RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support					
		RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
		RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
		RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key					
* RAID 50, 60 are supported on 8 x 2.5" disk bay models only											
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management										
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/i350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant										

Top				
				
* Slim optical bay is not available on 8 x 2.5" models				
Expansion Slots:				
Riser card 1 for slot 1, riser card 2 for slot 2				
Slot 1: half-length, full-height, PCIe 3.0 x16				
Slot 2: Low Profile, PCIe 3.0 x8**				
** x4 elec for single processor model, x8 elec for dual processors model				
Front/rear Ports:				
Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0				
Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA				

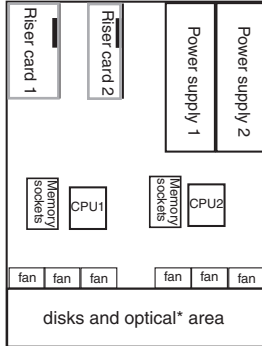
See footnotes for more detailed information
Model(s) announced January 21, 2014

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Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AD0000US	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	2nd	16GBx12 1600MHz LVRDIMM	8x2.5" HS	RAID500 +upgrade	8x900GB 2.5" SAS(RAID50)	N/A	X540T2	No	iKVM	Cable	1	TPM	2012 Standard	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support*		RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades					
		RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support					
		RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
		RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
		RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key					
* RAID 50, 60 are supported on 8 x 2.5" disk bay models only						Top 					
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed					<i>* Slim optical bay is not available on 8 x 2.5" models</i>					
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management					Expansion Slots: Riser card 1 for slot 1, riser card 2 for slot 2 Slot 1: half-length, full-height, PCIe 3.0 x16 Slot 2: Low Profile, PCIe 3.0 x8** <i>** x4 elec for single processor model, x8 elec for dual processors model</i>					
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/i350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2					Front/rear Ports: Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0 Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA					
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant										

See footnotes for more detailed information
Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70A90000US	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	2nd	8GBx8 (lockstep) 1600MHz LVRDIMM	6X2.5 HS	RAID700 +Battery	6x400GB SSD(RAID50)	No	X540T2	No	iKVM	Cable	1	TPM	2012 Standard	1
70A90001UX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	2nd	8GBx8 1600MHz LVRDIMM	6X2.5 HS	RAID700	6x1TB 2.5 SATA	DVD±RW	350T2	No	iKVM	No	1	TPM	No	3
70A90002UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	2nd	8GBx8 1600MHz LVRDIMM	6X2.5 HS	RAID700 +Battery	6x300GB 2.5 SAS	DVD±RW	350T2	No	iKVM	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support*		RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades					
		RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support					
		RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
		RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
		RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key					
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management										
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/i350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant										

Riser card 1

Riser card 2

Power supply 1

Power supply 2

Memory sockets

CPU1

Memory sockets

CPU2

fan

fan

fan

fan

fan

fan

disks and optical* area

* Slim optical bay is not available on 8 x 2.5" models

Front: Supports the following disk bay configurations:

4 x 3.5"

optical

disk

disk

disk

disk

6 x 2.5"

optical

disk

disk

disk

disk

8 x 2.5"

disk

disk

disk

disk

disk

Rear

PSU

PSU

2 - PCIe x8

1 - PCIe x16

Expansion Slots:

Riser card 1 for slot 1, riser card 2 for slot 2

Slot 1: half-length, full-height, PCIe 3.0 x16

Slot 2: Low Profile, PCIe 3.0 x8**

** x4 elec for single processor model, x8 elec for dual processors model

Front/rear Ports:

Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0

Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA

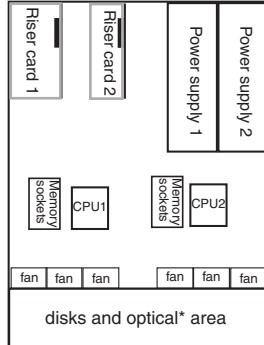
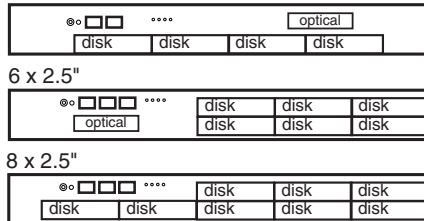
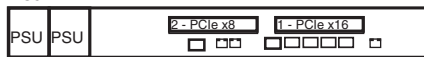
See footnotes for more detailed information
Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AA0000US	Xeon E5-2403 v2 4C/1.8GHz/10MB/1333MHz	2nd	16GBx12 1600MHz LVRDIMM	8X2.5 HS	RAID700	4x300GB 2.5" SAS(RAID6) +4x400GB SSD(RAID5)	N/A	X520SR2	No	iKVM	Cable	1	TPM	2012 Standard	3
70AA0001UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	2nd	16GBx8 1600MHz LVRDIMM	8X2.5 HS	RAID710 +CacheVault	6x600GB 2.5 SAS	N/A	X540T2	No	iKVM	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

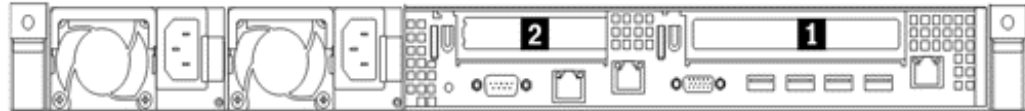
- For detailed platform specifications, please see [ThinkServer RD340 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD340 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support*		RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades					
		RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support					
		RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
		RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
		RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key					
Optical drive (optional)	4 x 3.5"/6 x 2.5" : one slim optical bay, supports one optional slim optical 8 x 2.5": none optical bay, optional external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management										
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/i350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant										

Top									
									
* Slim optical bay is not available on 8 x 2.5" models									
Expansion Slots:									
Riser card 1 for slot 1, riser card 2 for slot 2									
Slot 1: half-length, full-height, PCIe 3.0 x16									
Slot 2: Low Profile, PCIe 3.0 x8**									
** x4 elec for single processor model, x8 elec for dual processors model									
Front: Supports the following disk bay configurations:									
4 x 3.5"									
									
6 x 2.5"									
8 x 2.5"									
Rear									
									
Front/rear Ports:									
Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0									
Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA									

See footnotes for more detailed information
Model(s) announced January 21, 2014

ThinkServer RD340 Platform Systems Specifications - I of II

Components	Specifications																									
Mechanical	<ul style="list-style-type: none">• 1U rack with rail kit• 19" W x 28.9" D x 1.72" H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured																									
Chipset	Intel C606 Chipset																									
Processors	Two LGA1356 sockets, supports up to two processors from Intel Xeon E5-2400 or Xeon E5-2400 v2 families, up to 8 cores (E5-2400 series)/10 cores (E5-2400 v2 series), one QPI links up to 8.0GT/s, up to 20MB (E5-2400 series)/25MB (E5-2400 v2 series) cache, integrated 3-channel DDR3 memory controller up to 1600MHz																									
Memory type	1600MHz, LV RDIMM*, DDR3, 3-channel per processor, 240-pin <i>* By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting</i>																									
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor																									
Memory protection	ECC, memory mirroring, memory sparing																									
Disk bays configurations	Supports one of the following configurations <ul style="list-style-type: none">• 4 x 3.5" disk bays + 1 x slim optical bay• 6 x 2.5" disk bays + 1 x slim optical bay• 8 x 2.5" disk bays																									
RAID support*	<table><tr><th>RAID adapter</th><th>RAID support**</th><th>Cache</th><th>Transfer rates</th><th>Optional upgrades</th></tr><tr><td>RAID 300 (onboard)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5 support</td></tr><tr><td>RAID 500 (LSI 9240-8i)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5, 50 support</td></tr><tr><td>RAID 700 (LSI 9260-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>512MB</td><td>6Gb/s</td><td>optional intelligent Battery Backup Unit (iBBU08)</td></tr><tr><td>RAID 710 (LSI 9270CV-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>1GB</td><td>6Gb/s</td><td><ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key</td></tr></table> <i>* RAID 50, 60 are supported on 8 x 2.5" disk bay models only</i>	RAID adapter	RAID support**	Cache	Transfer rates	Optional upgrades	RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key
RAID adapter	RAID support**	Cache	Transfer rates	Optional upgrades																						
RAID 300 (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support																						
RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support																						
RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)																						
RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key																						
Optical drive (optional)	4 x 3.5"/6 x 2.5" models: one slim optical bay, supports one optional slim optical 8 x 2.5" models: none optical bay, optional external USB optical is needed																									
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management																									
Front ports	One analog VGA DB-15 connector (for 6 x 2.5"/8 x 2.5" models), two USB 2.0																									
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector																									
Expansion Slots	<div></div> Two PCI-Express slots via two riser cards, riser card 1 for slot 1, riser card 2 for slot 2 Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8 (x4 elec for single processor model, x8 elec for dual processors model)																									
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; <i>Maximum resolution: 1920x1200@60Hz</i>																									
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic, IDM basic LED lights indicate failing component category																									
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Front control panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate																									
Cooling fans	6 fans, non-hot swap, 5 + 1 redundant																									
Cable mgmt (opt)	Optional cable management arm on selected models																									

ThinkServer RD340 Platform Systems Specifications - II of II

Components	Specifications		
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies		
Hot-swap parts	Disk drives, power supplies, and cooling fans		
Security features (TPM is optional)	Power-on password/administrator password/Trusted Platform Module (TCG 1.2-compliant)		
Safety, environment, and certifications	Environmental certifications	<ul style="list-style-type: none"> • Energy Star Server 2.0 qualified • RoHS-compliant 	
	EMC	FCC Class A, CSA, CE	
	240VA	Supports	
	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)	
	Temperature - non operating (no package)	-10 °C to 60 °C	
	Temperature - non operating (with package)	-40 °C to 70 °C	
	Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)	
	Humidity - operating	8%~80%, non-condensing	
	Humidity - non operating (no package)	8%~80%, non-condensing	
	Humidity - non operating (with package)	8%~90%, non-condensing	
	Acoustic noise (idle/working mode)	System Configuration	
		Category	
		Entry level	High-end
		1	2
		CPU	
		4GB x 1	4GB x 12
		Memory	
		Slim optical	Slim optical
		Optical Drive	
		4 x 3.5"	6 x 2.5"
		Drive Bays	
		RAID500	RAID500
		RAID	
		2 x 500GB 3.5" SATA	6 x 300GB 2.5" SAS
		HDD	
		550Wx1	550Wx2
		PSU	
		45.28 dB(A)	44.74 dB(A)
		Sound Pressure (operating)	
		45.28 dB(A)	44.95 dB(A)
		Sound Pressure (idle)	

ThinkServer RD340 Optional Configurations - Processor and Memory

Rack kit	Included in models																																																																																																																																																																																																																																														
Processor	The following processor options are available:																																																																																																																																																																																																																																														
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ThinkServer RD340 Optional Configurations - Storage and RAID

Disk drive options for 3.5" disk bay models (8 x 3.5"/12 x 3.5")	Hot-swap disk drive options for 3.5" bay		Part Number
	3.5" SATA Hard Drive		
	ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89473
	ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89474
	ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89475
	ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89477
	ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0C19520
	3.5" SAS Hard Drive		
	ThinkServer 3.5" 1TB 7.2K SAS 6Gbps Hot Swap Hard Drive		0C19530
	ThinkServer 3.5" 2TB 7.2K SAS 6Gbps Hot Swap Hard Drive		0C19531
	ThinkServer 3.5" 3TB 7.2K SAS 6Gbps Hot Swap Hard Drive		0C19532
	ThinkServer 3.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive		67Y2616
	ThinkServer 3.5" 600GB 15K SAS 6Gbps Hot Swap Hard Drive		4XB0F28644
	2.5" SSD for 3.5" disk bay		
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive to 3.5" Kit		0C19571
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive to 3.5" Kit		0C19572
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive to 3.5" Kit		0C19573
Disk drive options for 2.5" disk bay models (8 x 2.5"/16 x 2.5")	Hot-swap disk drive options for 2.5" bay		Part Number
	2.5" SATA Hard Drive		
	ThinkServer 2.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0C19495
	ThinkServer 2.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0C19496
	2.5" SAS Hard Drive		
	ThinkServer 2.5" 300GB 10K SAS 6Gbps Hot Swap Hard Drive		67Y2619
	ThinkServer 2.5" 600GB 10K SAS 6Gbps Hot Swap Hard Drive		67Y2621
	ThinkServer 2.5" 900GB 10K SAS 6Gbps Hot Swap Hard Drive		0A89409
	ThinkServer 2.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive		0C19494
	2.5" SSD		
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive		0A89420
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive		0A89418
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive		0A89419
RAID options	RAID controller and RAID upgrade options		Part Number
	ThinkServer RAID 300 Upgrade Key for Advanced RAID		0A89422
	ThinkServer RAID 500 Adapter II		0A89464
	ThinkServer RAID 500 Upgrade Key for Advanced RAID		0A89407
	ThinkServer RAID 700 Adapter II		0A89463
	ThinkServer RAID 700 Battery		67Y2647
	ThinkServer RAID 710 Adapter		0C19489
	ThinkServer RAID Super Capacitor Module		0C19490
	ThinkServer RAID FastPath Software Key		0C19491
	ThinkServer RAID CacheCade Pro 2.0 Software Key		0C19492

ThinkServer RD340 Optional Configurations - Network, System Management, Power Supply

Network and HBA options	Network and HBA options	Part Number
	ThinkServer 1Gbps Ethernet I350-T2 Server Adapter by Intel	0C19506
	ThinkServer 1Gbps Ethernet I350-T4 Server Adapter by Intel	0C19507
	Lenovo 10Gbps Ethernet X540-T2 Server Adapter by Intel	0C19497
	Lenovo 10Gbps Ethernet X520-DA2 Server Adapter by Intel	0C19486
	Lenovo 10Gbps Ethernet Fiber Module by Intel	0C19488
	Lenovo 10Gbps Ethernet X520-SR2 Server Adapter by Intel	0C19487
	ThinkServer QLE8242-CU-CK Dual Port CNA by QLogic	0C19483
	ThinkServer LPe1250 Single Port 8Gb Fibre Channel HBA by Emulex	0C19476
	ThinkServer LPe12002 Dual Port 8Gb Fibre Channel HBA by Emulex	0C19478
	ThinkServer QLE2562 Dual Port 8Gb Fibre Channel HBA by QLogic	0C19482
Security options	Trusted Platform Module options	Part Number
	ThinkServer Trusted Platform Module	0A89428
Systems management options	System Management option for iKVM	Part Number
	ThinkServer Management Module Premium	67Y2624
	Cable Management option	Part Number
	ThinkServer Cable management Arm	0A89476
Power supply options	Power supply option	Part Number
	ThinkServer 550W Gold Hot Swap Redundant Power Supply	4X20E54689

ThinkServer RD340 Operating System and Virtualization Supportability Matrix

List of operating system and virtualization software supported on ThinkServer RD340

Operating System/Virtualization	Certified	Support ROK	Supports EasyStartup	Preloaded
Windows Server 2008 x86 Edition				
Windows Server 2008 Standard Edition (x86)			•	
Windows Server 2008 Enterprise Edition (x86)			•	
Windows Server 2008 Datacenter Edition (x86)			•	
Windows Server 2008 x64 Edition				
Windows Server 2008 Standard Edition (x64) (including Hyper-V)	•		•	
Windows Server 2008 Enterprise Edition (x64) (including Hyper-V)	•		•	
Windows Server 2008 Datacenter Edition (x64) (including Hyper-V)	•		•	
Windows Server 2008 R2 (x64) with SP1				
Windows Server 2008 Standard Edition R2 with SP1 (including Hyper-V)	•	•	•	
Windows Server 2008 Enterprise Edition R2 with SP1 (including Hyper-V)	•	•	•	
Windows Server 2008 Datacenter Edition R2 with SP1 (including Hyper-V)	•	•	•	
Windows Small Business Server 2011				
Windows Small Business Server 2011 Essentials	•		•	
Windows Small Business Server 2011 Standard	•	•	•	
Windows Small Business Server Premium Add-On (including Hyper-V)	•	•	•	
Windows Server 2012				
Windows Server 2012 Standard (including Hyper-V)	•	•	•	•
Windows Server 2012 Datacenter (including Hyper-V)	•	•	•	•
Windows Server 2012 Essentials	•	•	•	•
Windows Server 2012 Hyper-V	•		•	
Windows Server 2012 R2				
Windows Server 2012 R2 Standard (including Hyper-V)	•	•	•	•
Windows Server 2012 R2 Datacenter (including Hyper-V)	•	•	•	•
Windows Server 2012 R2 Essentials	•	•	•	•
Windows Server 2012 R2 Hyper-V	•		•	
SUSE Linux Enterprise Server x86				
SUSE Linux Enterprise Server 10 sp4			•	
SUSE Linux Enterprise Server 11 sp2	•		•	
SUSE Linux Enterprise Server 11 sp3	•		•	
SUSE Linux Enterprise Server x64				
SUSE Linux Enterprise Server 10 sp4			•	
SUSE Linux Enterprise Server 11 sp2	•		•	
RedHat Enterprise Linux Server (RHEL) x86				
RHEL 5.9	•		•	
RHEL 5.10	•		•	
RHEL 6.4	•		•	
RHEL 6.5	•		•	
RedHat Enterprise Linux Server x64				
RHEL 5.9	•		•	
RHEL 5.10	•		•	
RHEL 6.4	•		•	
RHEL 6.5	•		•	
Vmware x64				
Vmware ESXi 5.1 U1	•		•	•
Vmware ESXi 5.5	•	•	•	•
Microsoft Hyper V				
Microsoft Hyper-V server 2008	•		•	
Microsoft Hyper-v server 2008 R2 SP1	•		•	
Citrix				
Citrix XenServer 6.1	•		•	
Citrix XenServer 6.0.2	•		•	

Note:

- For more information on ThinkServer operating system and virtualization software, please visit ThinkServer Software page: <http://shop.lenovo.com/us/en/servers/thinkserver/server-software.html>
- For ThinkServer operating system and virtualization software options, please visit ThinkServer OS and virtualization Options document: http://www.lenovo.com/images/products/server/pdfs/datasheets/ThinkServer_OS_&Virtualization_Options_Datasheet.pdf

ThinkServer RD340 Services Upgrade Options

Partial list of Lenovo Services for ThinkServer RD340 models with 3-year onsite base warranty
For more information see: http://www.lenovo.com/services_warranty/us/en/lenovo-warranty.html

Upgrade Service Description	Part Number
Warranty	
3YR Onsite 24x7x4 Hour Response	5WS0F15458
3YR Onsite 24x7x8 Hour Response	5WS0F15392
3YR Onsite 9x5x4 Hour Response	5WS0F15355
4YR Onsite 24x7x4 Hour Response	5WS0F15443
4YR Onsite 24x7x8 Hour Response	5WS0F15395
4YR Onsite 9x5x4 Hour Response	5WS0F15394
4YR Onsite NBD	5WS0F15415
5YR Onsite 24x7x4 Hour Response	5WS0F15377
5YR Onsite 24x7x8 Hour Response	5WS0F15440
5YR Onsite 9x5x4 Hour Response	5WS0F15430
5YR Onsite NBD	5WS0F15419
Keep Your Drive (KYD) Service	
3YR Keep Your Drive	5PS0F15436
3YR Onsite 24x7x4 Hour Response + KYD	5PS0F15376
3YR Onsite 24x7x8 Hour Response + KYD	5PS0F15349
3YR Onsite 9x5x4 Hour Response + KYD	5PS0F15448
4YR Onsite 24x7x4 Hour Response + KYD	5PS0F15389
4YR Onsite 24x7x8 Hour Response + KYD	5PS0F15359
4YR Onsite 9x5x4 Hour Response + KYD	5PS0F15456
4YR Onsite NBD + KYD	5PS0F15459
5YR Onsite 24x7x4 Hour Response + KYD	5PS0F15402
5YR Onsite 24x7x8 Hour Response + KYD	5PS0F15381
5YR Onsite 9x5x4 Hour Response + KYD	5PS0F15366
5YR Onsite NBD + KYD	5PS0F15391
Priority Technical Support	
3YR KYD + Priority Support	5PS0F15417
3YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15352
3YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15399
3YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15444
3YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15418
3YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15398
3YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15468
3YR Priority Support	5WS0E76471
4YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15462
4YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15410
4YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15433
4YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15425
4YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15400
4YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15351
4YR Onsite NBD + KYD + Priority Support	5PS0F15373
4YR Onsite NBD + Priority Support	5WS0F15401
4YR Priority Support	5WS0E77170
5YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15350
5YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15412
5YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15471
5YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15447
5YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15437
5YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15382
5YR Onsite NBD + KYD + Priority Support	5PS0F15388
5YR Onsite NBD + Priority Support	5WS0F15463
5YR Priority Support	5WS0E77173

Upgrade Service Description	Part Number
Post Warranty	
1YR Onsite 24x7x4 Hour Response	5WS0F15435
1YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15370
1YR Onsite 24x7x8 Hour Response	5WS0F15427
1YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15361
1YR Onsite 9x5x4 Hour Response	5WS0F15416
1YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15348
1YR Onsite NBD	5WS0F15407
1YR Onsite NBD + Priority Support	5WS0F15465
TopSeller Priority (TopSeller models only)	
3YR Onsite 24x7x4 Hour Response	5WS0D73789
3YR Onsite 9x5x4 Hour Response	5WS0D73787
4YR Onsite 24x7x4 Hour Response	5WS0D73792
4YR Onsite 9x5x4 Hour Response	5WS0D73791
4YR Onsite NBD	5WS0F15470
3YR Onsite 24x7x4 Hour Response+Priority Support	5WS0F15414
3YR Onsite 9x5x4 Hour Response+Priority Support	5WS0F15423
3YR Priority Support	5WS0E76457
4YR Priority Support	5WS0E76482

Note:

24x7x4: 4 Hour Onsite Response Time in 24x7 Service Window (requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.
- Best coverage for business critical work loads

9x5x4: 4 Hour Onsite Response Time in 9x5 Service Window (requires Location Activation)

- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.

24x7x8: 8 Hour Onsite Response Time in 24x7 Service Window (requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 8 hours.

Priority Technical Support

Lenovo's Priority Technical Support provides direct access to an advanced level technician supporting all of hardware, operating system and software needs related to server issues, available 24 hours a day, 7 days a week.

Keep Your Drive (KYD) Service

Retain drive (hard drive or SSD) and confidential data if the drive must be replaced.

To confirm if 4hr services are available in a specified location, please use ThinkServer

Service Availability Tool: http://www.lenovo.com/services_warranty/us/en/locator.html

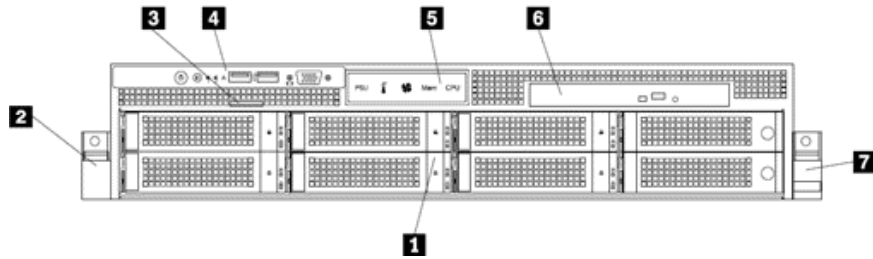
Once purchased, to activate the location of your 4hr/8hr ThinkServer Service, please use

ThinkServer Service Activation page: <http://www.lenovo.com/activation>

ThinkServer RD440 Overview

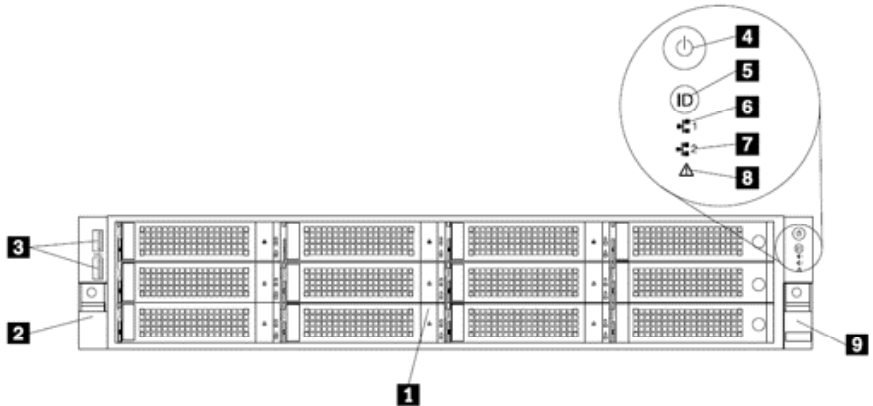
Front view - ThinkServer RD440 supports the following disk bay configurations:

ThinkServer RD440 with 8 x 3.5" Disk Drive Bays



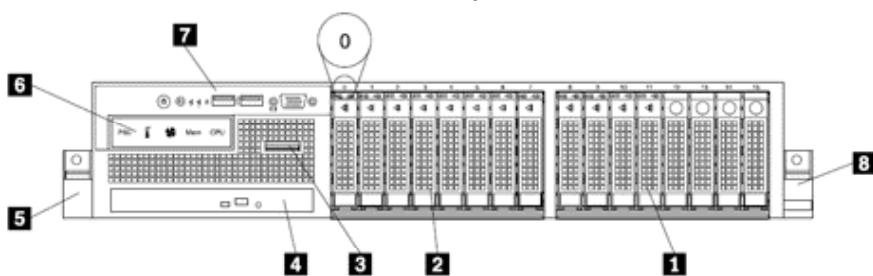
1. 8 x 3.5" hot-swap disk drive bays
2. Rack handle (left)
3. Pull-out information card
4. Front panel
 - Power Button with LED
 - ID button with LED
 - 2 Network interface status LEDs
 - System error LED
 - 2 USB 2.0
 - 1 VGA
5. Intelligent Diagnostics Module (optional)
6. Slim optical drive (optional)
7. Rack handle (right)

ThinkServer RD440 with 12 x 3.5" Disk Drive Bays



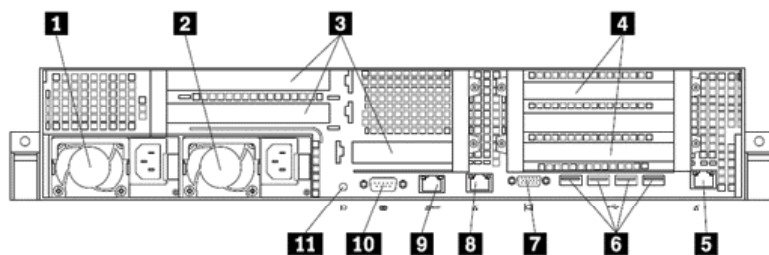
1. 12 x 3.5" hot-swap disk drive bays
2. Rack handle (left)
3. Pull-out information card
4. Power Button with LED
5. ID button with LED
6. Network interface status LED 1
7. Network interface status LED 2
8. System error LED
9. Rack handle (right)

ThinkServer RD440 with 2.5" Disk Drive Bays



1. 8 x hot-swap disk drive bays (for 16x2.5" hard drive bays model)
2. 8 x Hot-swap disk drive bays
3. Pull-out information card
4. Slim optical drive (optional)
5. Rack handle (left)
6. Intelligent Diagnostics Module (basic or premium, optional)
7. Front panel
 - Power Button with LED
 - ID button with LED
 - 2 Network interface status LEDs
 - System error LED
 - 2 USB 2.0
 - 1 VGA
8. Rack handle (right)

Rear view

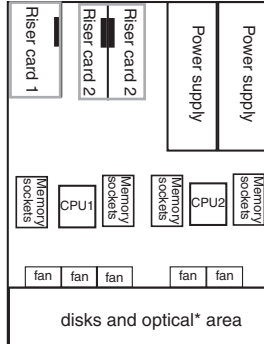
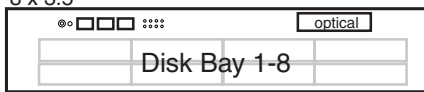
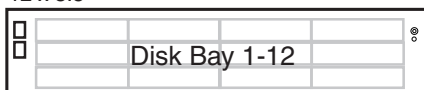
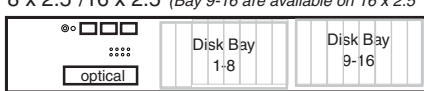
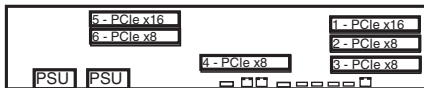


1. Hot-swap redundant power supply 2 (optional)
2. Hot-swap redundant power supply 1
3. Three PCI Express slots by riser card 2
4. Two PCI Express slots by riser card 1
5. Ethernet 2 (RJ-45)
6. Four USB 2.0
7. VGA DB-15 connector
8. Ethernet 1 (RJ-45)
9. Dedicate/share management connector (RJ-45)
10. Serial
11. ID LED

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AH001QUX	Xeon E5-2403 v2 4C/1.8GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID300	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH001RUX	Xeon E5-2407 v2 4C/2.4GHz/10MB/1333MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID300	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH001SUX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID300	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH001TUX	Xeon E5-2430 v2 6C/2.5GHz/15MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID300	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH001UUX	Xeon E5-2440 v2 8C/1.9GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID300	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH001VUX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID300	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH001WUX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID300	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD440 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD440 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 2U rack with rail kit• 19" W x 28.9" D x 3.45" H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support	RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	Top  <i>* Slim optical bay is not available on 12 x 3.5" models</i>					
	RAID 300* (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support						
	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support						
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)						
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key						
<i>**RAID 300 is supported on 8 x 3.5" and 8 x 2.5" models only</i>											
Optical drive (optional)	8 x 3.5"/8 x 2.5"/16 x 2.5": one slim optical bay, supports one slim optical 12 x 3.5" : none optical bay, external USB optical is needed					Front: Supports the following disk bay configurations: 8 x 3.5"  12 x 3.5"  8 x 2.5"/16 x 2.5"/Bay 9-16 are available on 16 x 2.5" models) 					
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management					Rear 					
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2					Expansion Slots: Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6: Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 2.0 x8 (x4) Slot 4: Low Profile, PCIe 3.0 x8 (x4 elec) Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8					
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) or IDM Premium on selected 8 x 3.5"/8 x 2.5"/16 x 2.5" models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					Front/rear Ports: Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0 Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA					
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	5 fans, hot swap, 4 + 1 redundant										

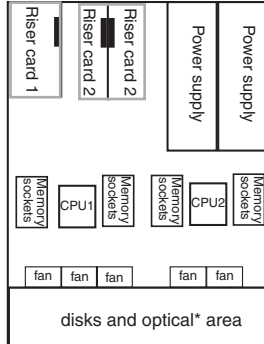
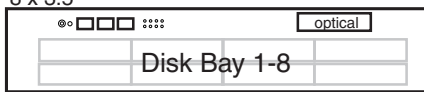
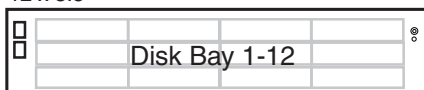
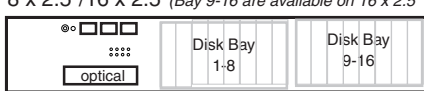
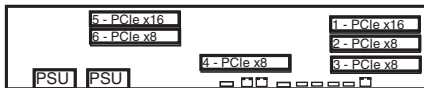
See footnotes for more detailed information

Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AH001XUX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID700	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH001YUX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID700	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH0020UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID710	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH0021UX	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	No	8GBx1 1600MHz LVRDIMM	8X3.5" HS	RAID710	Open	DVD±RW	No	IDM Premium	IPMI	No	1	TPM	No	3
70AH0022UX	Xeon E5-2420 v2 6C/2.2GHz/15MB/1600MHz	2nd	8GBx8 1600MHz LVRDIMM	8X3.5" HS	RAID700	8x2TB 3.5" SAS	DVD±RW	350T2	IDM Premium	iKVM	No	1	TPM	No	3
70AH0023UX	Xeon E5-2450 v2 8C/2.5GHz/20MB/1600MHz	2nd	16GBx8 1600MHz LVRDIMM	8X3.5" HS	RAID710 +CacheVault	6x4TB 3.5" SATA	DVD±RW	350T4	IDM Premium	iKVM	No	1	TPM	No	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD440 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD440 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 2U rack with rail kit• 19" W x 28.9" D x 3.45" H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models																												
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies																												
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models																												
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant																												
RAID support	<table><tr><th>RAID adapter</th><th>RAID support</th><th>Cache</th><th>Transfer rates</th><th>Optional upgrades</th></tr><tr><td>RAID 300* (onboard)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5 support</td></tr><tr><td>RAID 500 (LSI 9240-8i)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5, 50 support</td></tr><tr><td>RAID 700 (LSI 9260-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>512MB</td><td>6Gb/s</td><td>optional intelligent Battery Backup Unit (iBBU08)</td></tr><tr><td>RAID 710 (LSI 9270CV-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>1GB</td><td>6Gb/s</td><td><ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key</td></tr></table> <p><i>**RAID 300 is supported on 8 x 3.5" and 8 x 2.5" models only</i></p>					RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	RAID 300* (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key	<p>Top</p>  <p><i>* Slim optical bay is not available on 12 x 3.5" models</i></p>				
RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades																															
RAID 300* (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support																															
RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support																															
RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)																															
RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key																															
Optical drive (optional)	8 x 3.5"/8 x 2.5"/16 x 2.5": one slim optical bay, supports one slim optical 12 x 3.5" : none optical bay, external USB optical is needed					<p>Front: Supports the following disk bay configurations:</p> <p>8 x 3.5"</p>  <p>12 x 3.5"</p>  <p>8 x 2.5"/16 x 2.5"/Bay 9-16 are available on 16 x 2.5" models</p> 																													
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management					<p>Rear</p> 																													
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2					<p>Expansion Slots:</p> <p>Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6: Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 2.0 x8 (x4) Slot 4: Low Profile, PCIe 3.0 x8 (x4 elec) Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8</p>																													
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) or IDM Premium on selected 8 x 3.5"/8 x 2.5"/16 x 2.5" models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					<p>Front/rear Ports:</p> <p>Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0 Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA</p>																													
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate																																		
Cooling fans	5 fans, hot swap, 4 + 1 redundant																																		

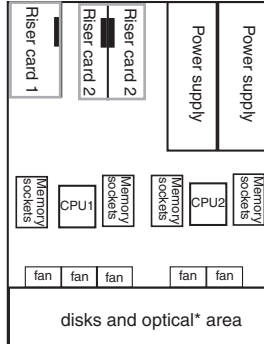
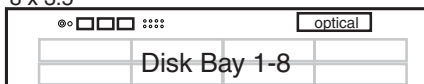
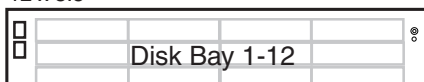
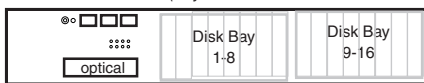
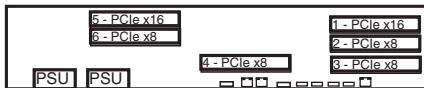
See footnotes for more detailed information

Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AE0000US	Xeon E5-2403 v2 4C/1.8GHz/10MB/1333MHz	2nd	16GBx12 1600MHz LVRDIMM	8X3.5" HS	RAID700	8x500GB 3.5" SATA(RAID60)	DVD±RW	X520DA2 +X540T2	IDM Premium	iKVM	Cable	1	TPM	2012 Standard	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD440 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD440 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 2U rack with rail kit• 19" W x 28.9" D x 3.45" H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support	RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	Top 					
	RAID 300* (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support						
	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support						
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)						
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key						
**RAID 300 is supported on 8 x 3.5" and 8 x 2.5" models only						Front: Supports the following disk bay configurations: 8 x 3.5"  12 x 3.5"  8 x 2.5"/16 x 2.5" (Bay 9-16 are available on 16 x 2.5" models) 					
Optical drive (optional)	8 x 3.5"/8 x 2.5"/16 x 2.5": one slim optical bay, supports one slim optical 12 x 3.5" : none optical bay, external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management					Rear 					
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) or IDM Premium on selected 8 x 3.5"/8 x 2.5"/16 x 2.5" models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					Expansion Slots: Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6: Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 2.0 x8 (x4) Slot 4: Low Profile, PCIe 3.0 x8 (x4 elec) Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8					
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	5 fans, hot swap, 4 + 1 redundant					Front/rear Ports: Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0 Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA					

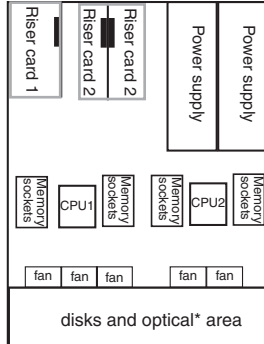
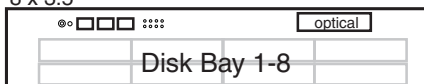
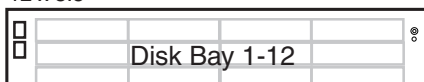
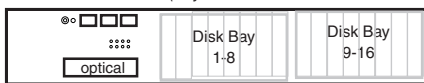
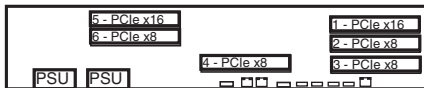
See footnotes for more detailed information

Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AF0000US	Xeon E5-2470 v2 10C/2.4GHz/25MB/1600MHz	2nd	16GBx6 1600MHz LVRDIMM	12X3.5" HS	RAID700	6x500GB 3.5" SATA(RAID60) +6x1TB 3.5" SATA(RAID10)	N/A	X520DA2	N/A	iKVM	Cable	1	TPM	2012 Standard	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD440 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD440 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 2U rack with rail kit• 19" W x 28.9" D x 3.45" H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support	RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	<div>Top</div>  <div>* Slim optical bay is not available on 12 x 3.5" models</div>					
	RAID 300* (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support						
	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support						
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)						
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key						
**RAID 300 is supported on 8 x 3.5" and 8 x 2.5" models only											
Optical drive (optional)	8 x 3.5"/8 x 2.5"/16 x 2.5": one slim optical bay, supports one slim optical 12 x 3.5" : none optical bay, external USB optical is needed					<div>Front:</div> Supports the following disk bay configurations: 8 x 3.5"  12 x 3.5"  8 x 2.5"/16 x 2.5" (Bay 9-16 are available on 16 x 2.5" models) 					
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management					<div>Rear</div> 					
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2					<div>Expansion Slots:</div> Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6: Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 2.0 x8 (x4) Slot 4: Low Profile, PCIe 3.0 x8 (x4 elec) Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8					
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) or IDM Premium on selected 8 x 3.5"/8 x 2.5"/16 x 2.5" models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					<div>Front/rear Ports:</div> Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0 Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA					
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	5 fans, hot swap, 4 + 1 redundant										

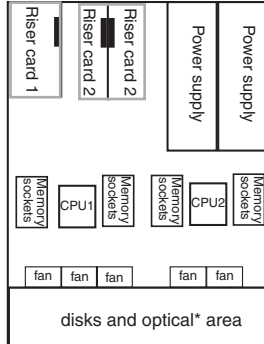
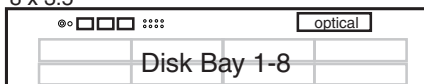
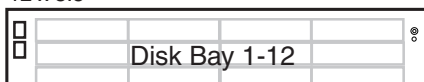
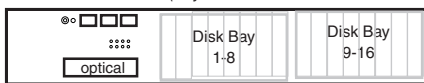
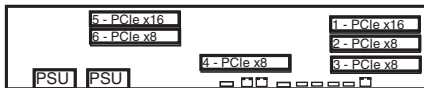
See footnotes for more detailed information

Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70AG0000US	E5-2440 6C/2.4GHz/15MB/1333MHz	2nd	8GBx6+16GBx6 1600MHz LVRDIMM	8X2.5" HS	RAID500	8x600GB 2.5" SAS(RAID50)	DVD±RW	X540T2 +X520DA2	IDM Premium	iKVM	Cable	1	TPM	2012 Standard	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

- For detailed platform specifications, please see [ThinkServer RD440 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD440 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 2U rack with rail kit• 19" W x 28.9" D x 3.45" H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support	RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	Top 					
	RAID 300* (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support						
	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support						
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)						
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key						
**RAID 300 is supported on 8 x 3.5" and 8 x 2.5" models only						Front: Supports the following disk bay configurations: 8 x 3.5"  12 x 3.5"  8 x 2.5"/16 x 2.5"/Bay 9-16 are available on 16 x 2.5" models 					
Optical drive (optional)	8 x 3.5"/8 x 2.5"/16 x 2.5": one slim optical bay, supports one slim optical 12 x 3.5" : none optical bay, external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management					Rear 					
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) or IDM Premium on selected 8 x 3.5"/8 x 2.5"/16 x 2.5" models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					Expansion Slots: Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6: Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 2.0 x8 (x4) Slot 4: Low Profile, PCIe 3.0 x8 (x4 elec) Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8					
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate										
Cooling fans	5 fans, hot swap, 4 + 1 redundant					Front/rear Ports: Front: 1 VGA (for 6 x 2.5"/8 x 2.5" models), 2 USB 2.0 Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA					

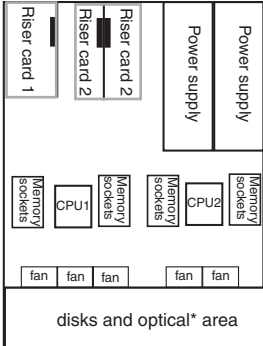
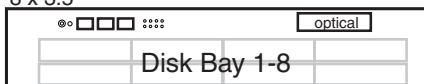
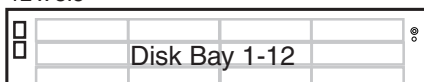
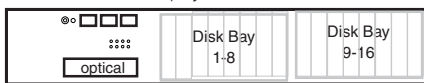
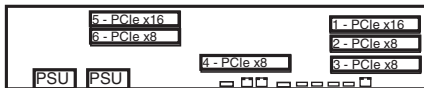
See footnotes for more detailed information

Model(s) announced January 21, 2014

Type-model ¹	Intel Xeon Processor	2nd CPU	Memory	Disk Bays	RAID controller	Storage	Slim optical	Discrete ethernet	Intelligent Diagnostics	Remote mgmt	Cable mgmt	PSU qty	TPM module	Preloaded OS	Base warranty (-year, on-site)
70B20000US	Xeon E5-2450L v2 10C/1.7GHz/25MB/1600MHz	2nd	4GBx6+16GBx6 1600MHz LVRDIMM	16X2.5" HS	RAID700 +Battery	12x900GB 2.5" SAS(RAID10) +4x1TB 2.5" SATA(RAID1)	DVD±RW	X520DA2	IDM Premium	iKVM	Cable	1	TPM	2012 Standard	3

1. Model in *italics* is Global model 2. By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting

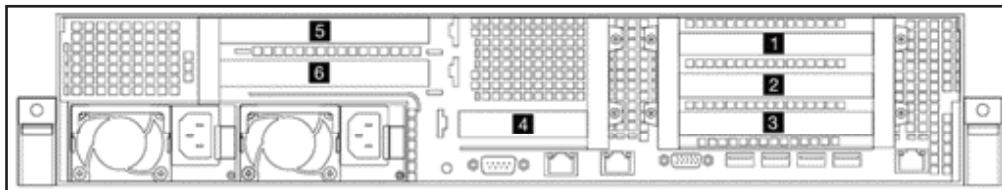
- For detailed platform specifications, please see [ThinkServer RD440 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD340, please see [ThinkServer RD440 Optional Configurations sheets](#)

Mechanical	<ul style="list-style-type: none">• 2U rack with rail kit• 19" W x 28.9" D x 3.45" H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured					Cable mgmt (opt)	Optional cable management arm on selected models				
Chipset	Intel C606 Chipset, two LGA1356 sockets for processors					Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies				
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor					Security features (TPM is optional)	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant) on selected models				
Memory protection	ECC, memory mirroring, memory sparing					Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant				
RAID support	RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	Top  <i>* Slim optical bay is not available on 12 x 3.5" models</i>					
	RAID 300* (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support						
	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support						
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)						
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key						
<i>**RAID 300 is supported on 8 x 3.5" and 8 x 2.5" models only</i>						Front: Supports the following disk bay configurations: 8 x 3.5"  12 x 3.5"  8 x 2.5"/16 x 2.5" (Bay 9-16 are available on 16 x 2.5" models)  Rear 					
Optical drive (optional)	8 x 3.5"/8 x 2.5"/16 x 2.5": one slim optical bay, supports one slim optical 12 x 3.5" : none optical bay, external USB optical is needed										
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management										
Discrete network (optional)	Supports the following Intel Server Adapter options on selected models: 1Gbps: 350-T2/I350-T4 10Gbps: X520-SR2/X520-DA2/X540-T2/Fiber Module for X520-DA2										
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) or IDM Premium on selected 8 x 3.5"/8 x 2.5"/16 x 2.5" models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part										
Systems management (iKVM is optional)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate					Expansion Slots: Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6: Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 2.0 x8 (x4) Slot 4: Low Profile, PCIe 3.0 x8 (x4 elec) <i>Slot 5-6 are available on dual processors models:</i> Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8					
Cooling fans	5 fans, hot swap, 4 + 1 redundant										

See footnotes for more detailed information

Model(s) announced January 21, 2014

ThinkServer RD440 Platform Systems Specifications - I of II

Components	Specifications																									
Mechanical	<ul style="list-style-type: none">• 2U rack with rail kit• 19" W x 28.9" D x 3.45" H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 28 kg (61.73 lb) when fully configured																									
Chipset	Intel C606 Chipset																									
Processors	Two LGA1356 sockets, supports up to two processors from Intel Xeon E5-2400 or Xeon E5-2400 v2 families, up to 8 cores (E5-2400 series)/10 cores (E5-2400 v2 series), one QPI links up to 8.0GT/s, up to 20MB (E5-2400 series)/25MB (E5-2400 v2 series) cache, integrated 3-channel DDR3 memory controller up to 1600MHz																									
Memory type	1600MHz, LV RDIMM*, DDR3, 3-channel per processor, 240-pin <i>* By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting</i>																									
Memory DIMMs	Twelve DIMM sockets, six DIMM sockets per processor																									
Memory capacity	Up to 192GB DDR3 LV RDIMM (16GB x 12)																									
Memory protection	ECC, memory mirroring, memory sparing																									
Disk bays configurations	Supports one of the following configurations: <ul style="list-style-type: none">• 8 x 3.5" disk bays + 1 x slim optical bay• 12 x 3.5" disk bays• 8 x 2.5" disk bays + 1 x slim optical bay• 16 x 2.5" disk bays + 1 x slim optical bay																									
RAID support	<table><tr><th>RAID adapter</th><th>RAID support</th><th>Cache</th><th>Transfer rates</th><th>Optional upgrades</th></tr><tr><td>RAID 300** (onboard)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5 support</td></tr><tr><td>RAID 500 (LSI 9240-8i)</td><td>0, 1, 10</td><td></td><td>6Gb/s</td><td>optional upgrade key, add RAID 5, 50 support</td></tr><tr><td>RAID 700 (LSI 9260-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>512MB</td><td>6Gb/s</td><td>optional intelligent Battery Backup Unit (iBBU08)</td></tr><tr><td>RAID 710 (LSI 9270CV-8i)</td><td>0, 1, 10, 5, 50, 6, 60</td><td>1GB</td><td>6Gb/s</td><td><ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key</td></tr></table> <i>** RAID 300 is supported on 8 x 3.5" and 8 x 2.5" models only</i>	RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades	RAID 300** (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support	RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key
RAID adapter	RAID support	Cache	Transfer rates	Optional upgrades																						
RAID 300** (onboard)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5 support																						
RAID 500 (LSI 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support																						
RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)																						
RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade Pro 2.0• optional FastPath key																						
Optical drive (optional)	8 x 3.5"/8 x 2.5"/16 x 2.5" models: one slim optical bay, supports one optional slim optical 12 x 3.5" models: none optical bay, optional external USB optical is needed																									
Onboard network	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management																									
Front ports	One analog VGA DB-15 connector (for 8 x 3.5", 8 x 2.5", and 16 x 2.5" models), two USB 2.0																									
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector																									
Expansion Slots	<div></div> <p>Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6</p> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec)</p> <p>Slot 2: half-length, full-height, PCIe 3.0 x8</p> <p>Slot 3: half-length, full-height, PCIe 2.0 x8 (x4)</p> <p>Slot 4: Low Profile, PCIe 3.0 x8 (x4 elec)</p> <p><i>Slot 5-6 are available on dual processors models:</i></p> <p>Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec)</p> <p>Slot 6: half-length, full-height, PCIe 3.0 x8</p>																									
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; <i>Maximum resolution: 1920x1200 @60Hz</i>																									

ThinkServer RD440 Platform Systems Specifications - II of II

Components	Specifications		
Intelligent Diagnostics Module (optional)	Supports optional Intelligent Diagnostics Module (IDM) basic or IDM Premium on selected 8 x 3.5"/8 x 2.5"/16 x 2.5" models, IDM basic LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part		
Systems management (iKVM is optional)	<ul style="list-style-type: none"> Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions Front control panel LEDs shows the status of power, ID, network, system Lenovo SmartGrid Manager ThinkServer EasyStartup/EasyManage/EasyUpdate 		
Security features (TPM is optional)	Power-on password/administrator password/Trusted Platform Module (TCG 1.2-compliant)		
Cooling fans	5 fans, hot-swap, 4 + 1 redundant		
Cable mgmt (opt)	Optional cable management arm on selected models		
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies		
Hot-swap parts	Disk drives, power supplies, and cooling fans		
Safety, environment, and certifications	Environmental certifications	<ul style="list-style-type: none"> Energy Star Server 2.0 qualified RoHS-compliant 	
	EMC	FCC Class A, CSA, CE	
	240VA	Supports	
	Temperature - operating	50 ° F to 95 ° F (10 ° C to 35 ° C)	
	Temperature - non operating (no package)	-10 ° C to 60 ° C	
	Temperature - non operating (with package)	-40 ° C to 70 ° C	
	Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)	
	Humidity - operating	8%~80%, non-condensing	
	Humidity - non operating (no package)	8%~80%, non-condensing	
	Humidity - non operating (with package)	8%~90%, non-condensing	
	Acoustic noise (idle/working mode)	System Configuration	
		Category	
		Entry level	High-end
		CPU	12
		Memory	4GB x 12
		Optical Drive	None
		Drive Bays	12 x 3.5"
		RAID	RAID500
		HDD	12 x 2TB 3.5" SAS
		PSU	800Wx2
		Sound Pressure (operating)	44.2 dB(A)
		Sound Pressure (idle)	44.7 dB(A)

ThinkServer RD440 Optional Configurations - Processor and Memory

Rack kit	Included in models									
Processor	The following processor options are available:									
	Processor Number	# of Cores	# of Threads	Clock Speed	Processors Specifications*					Part Number
					Max Turbo Frequency	Cache	QPI Speed	Max TDP	Memory Speed	
	Intel Xeon E5-2400 v2 Series									
	Xeon E5-2440 v2	8	16	1.9 GHz	2.4 GHz	20MB	7.2 GT/s	95W	DDR3-1600	0C19539
	Xeon E5-2450 v2	8	16	2.5 GHz	3.3 GHz	20MB	8 GT/s	95W	DDR3-1600	0C19538
	Xeon E5-2450L v2	10	20	1.7 GHz	2.1 GHz	25MB	7.2 GT/s	60W	DDR3-1600	0C19544
	Xeon E5-2470 v2	10	20	2.4 GHz	3.2 GHz	25MB	8 GT/s	95W	DDR3-1600	0C19537
	Xeon E5-2407 v2	4	4	2.4 GHz	2.4 GHz	10MB	6.4 GT/s	80W	DDR3-1333	0C19542
	Xeon E5-2420 v2	6	12	2.2 GHz	2.7 GHz	15MB	7.2 GT/s	80W	DDR3-1600	0C19541
	Xeon E5-2430 v2	6	12	2.5 GHz	3 GHz	15MB	7.2 GT/s	80W	DDR3-1600	0C19540
	Xeon E5-2430L v2	6	12	2.4 GHz	2.8 GHz	15MB	7.2 GT/s	60W	DDR3-1600	0C19545
	Xeon E5-2403 v2	4	4	1.8 GHz	1.8 GHz	10MB	6.4 GT/s	80W	DDR3-1333	0C19543
	Intel Xeon E5-2400 Series									
	Xeon E5-2450L	8	16	1.8 GHz	2.3 GHz	20MB	8 GT/s	70 W	DDR3-1600	0A89450
	Xeon E5-2450	8	16	2.1 GHz	2.9 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89444
	Xeon E5-2440	6	12	2.4 GHz	2.9 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89445
	Xeon E5-2430L	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	60 W	DDR3-1333	0A89451
	Xeon E5-2407	4	4	2.2 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89448
	Xeon E5-2403	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89449
	Xeon E5-2430	6	12	2.2 GHz	2.7 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89446
	Xeon E5-2420	6	12	1.9 GHz	2.4 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89447
	Xeon E5-2470	8	16	2.3 GHz	3.1 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89443
	Notes: All processors specifications is provided by Intel and may be changed at any time without notice. The information herein is provided "as-is". Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/									
Memory options	Memory options								Part Number	
	ThinkServer 4GB DDR3L-1600MHz (1RX8) RDIMM								0C19533	
	ThinkServer 8GB DDR3L-1600MHz (2RX8) RDIMM								0C19534	
	ThinkServer 16GB DDR3L-1600MHz (2RX4) RDIMM								0C19535	

ThinkServer RD440 Optional Configurations - Storage and RAID

Disk drive options for 3.5" disk bay models (8 x 3.5"/12 x 3.5")	Hot-swap disk drive options for 3.5" bay		Part Number
	3.5" SATA Hard Drive		
	ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89473
	ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89474
	ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89475
	ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0A89477
	ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0C19520
	3.5" SAS Hard Drive		
	ThinkServer 3.5" 1TB 7.2K SAS 6Gbps Hot Swap Hard Drive		0C19530
	ThinkServer 3.5" 2TB 7.2K SAS 6Gbps Hot Swap Hard Drive		0C19531
	ThinkServer 3.5" 3TB 7.2K SAS 6Gbps Hot Swap Hard Drive		0C19532
	ThinkServer 3.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive		67Y2616
	ThinkServer 3.5" 600GB 15K SAS 6Gbps Hot Swap Hard Drive		4XB0F28644
	2.5" SSD for 3.5" disk bay		
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive to 3.5" Kit		0C19571
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive to 3.5" Kit		0C19572
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive to 3.5" Kit		0C19573
Disk drive options for 2.5" disk bay models (8 x 2.5"/16 x 2.5")	Hot-swap disk drive options for 2.5" bay		Part Number
	2.5" SATA Hard Drive		
	ThinkServer 2.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0C19495
	ThinkServer 2.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive		0C19496
	2.5" SAS Hard Drive		
	ThinkServer 2.5" 300GB 10K SAS 6Gbps Hot Swap Hard Drive		67Y2619
	ThinkServer 2.5" 600GB 10K SAS 6Gbps Hot Swap Hard Drive		67Y2621
	ThinkServer 2.5" 900GB 10K SAS 6Gbps Hot Swap Hard Drive		0A89409
	ThinkServer 2.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive		0C19494
	2.5" SSD		
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive		0A89420
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive		0A89418
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive		0A89419
RAID options	RAID controller and RAID upgrade options		Part Number
	ThinkServer RAID 300 Upgrade Key for Advanced RAID		0A89422
	ThinkServer RAID 500 Adapter II		0A89464
	ThinkServer RAID 500 Upgrade Key for Advanced RAID		0A89407
	ThinkServer RAID 700 Adapter II		0A89463
	ThinkServer RAID 700 Battery		67Y2647
	ThinkServer RAID 710 Adapter		0C19489
	ThinkServer RAID Super Capacitor Module		0C19490
	ThinkServer RAID FastPath Software Key		0C19491
	ThinkServer RAID CacheCade Pro 2.0 Software Key		0C19492

ThinkServer RD440 Optional Configurations - Network, System Management, Power Supply

Network and HBA options	Network and HBA options	Part Number
	ThinkServer 1Gbps Ethernet I350-T2 Server Adapter by Intel	0C19506
	ThinkServer 1Gbps Ethernet I350-T4 Server Adapter by Intel	0C19507
	Lenovo 10Gbps Ethernet X540-T2 Server Adapter by Intel	0C19497
	Lenovo 10Gbps Ethernet X520-DA2 Server Adapter by Intel	0C19486
	Lenovo 10Gbps Ethernet Fiber Module by Intel	0C19488
	Lenovo 10Gbps Ethernet X520-SR2 Server Adapter by Intel	0C19487
	ThinkServer QLE8242-CU-CK Dual Port CNA by QLogic	0C19483
	ThinkServer LPe1250 Single Port 8Gb Fibre Channel HBA by Emulex	0C19476
	ThinkServer LPe12002 Dual Port 8Gb Fibre Channel HBA by Emulex	0C19478
	ThinkServer QLE2562 Dual Port 8Gb Fibre Channel HBA by QLogic	0C19482
Security options	Trusted Platform Module options	Part Number
	ThinkServer Trusted Platform Module	0A89428
Systems management options	System Management option for iKVM	Part Number
	ThinkServer Management Module Premium	67Y2624
	Cable Management option	Part Number
	ThinkServer Cable management Arm	0A89476
Power supply options	Power supply option	Part Number
	ThinkServer 800W Gold Hot Swap Redundant Power Supply for Rack	4X20E54690

ThinkServer RD440 Services Upgrade Options

Partial list of Lenovo Services for ThinkServer RD440 models with 3-year onsite base warranty
For more information see: http://www.lenovo.com/services_warranty/us/en/lenovo-warranty.html

Upgrade Service Description	Part Number
Warranty	
3YR Onsite 24x7x4 Hour Response	5WS0F15458
3YR Onsite 24x7x8 Hour Response	5WS0F15392
3YR Onsite 9x5x4 Hour Response	5WS0F15355
4YR Onsite 24x7x4 Hour Response	5WS0F15443
4YR Onsite 24x7x8 Hour Response	5WS0F15395
4YR Onsite 9x5x4 Hour Response	5WS0F15394
4YR Onsite NBD	5WS0F15415
5YR Onsite 24x7x4 Hour Response	5WS0F15377
5YR Onsite 24x7x8 Hour Response	5WS0F15440
5YR Onsite 9x5x4 Hour Response	5WS0F15430
5YR Onsite NBD	5WS0F15419
Keep Your Drive (KYD) Service	
3YR Keep Your Drive	5PS0F15436
3YR Onsite 24x7x4 Hour Response + KYD	5PS0F15376
3YR Onsite 24x7x8 Hour Response + KYD	5PS0F15349
3YR Onsite 9x5x4 Hour Response + KYD	5PS0F15448
4YR Onsite 24x7x4 Hour Response + KYD	5PS0F15389
4YR Onsite 24x7x8 Hour Response + KYD	5PS0F15359
4YR Onsite 9x5x4 Hour Response + KYD	5PS0F15456
4YR Onsite NBD + KYD	5PS0F15459
5YR Onsite 24x7x4 Hour Response + KYD	5PS0F15402
5YR Onsite 24x7x8 Hour Response + KYD	5PS0F15381
5YR Onsite 9x5x4 Hour Response + KYD	5PS0F15366
5YR Onsite NBD + KYD	5PS0F15391
Priority Technical Support	
3YR KYD + Priority Support	5PS0F15417
3YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15352
3YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15399
3YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15444
3YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15418
3YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15398
3YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15468
3YR Priority Support	5WS0E76471
4YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15462
4YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15410
4YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15433
4YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15425
4YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15400
4YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15351
4YR Onsite NBD + KYD + Priority Support	5PS0F15373
4YR Onsite NBD + Priority Support	5WS0F15401
4YR Priority Support	5WS0E77170
5YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15350
5YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15412
5YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15471
5YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15447
5YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15437
5YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15382
5YR Onsite NBD + KYD + Priority Support	5PS0F15388
5YR Onsite NBD + Priority Support	5WS0F15463
5YR Priority Support	5WS0E77173

Upgrade Service Description	Part Number
Post Warranty	
1YR Onsite 24x7x4 Hour Response	5WS0F15435
1YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15370
1YR Onsite 24x7x8 Hour Response	5WS0F15427
1YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15361
1YR Onsite 9x5x4 Hour Response	5WS0F15416
1YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15348
1YR Onsite NBD	5WS0F15407
1YR Onsite NBD + Priority Support	5WS0F15465
TopSeller Priority (TopSeller models only)	
3YR Onsite 24x7x4 Hour Response	5WS0D73789
3YR Onsite 9x5x4 Hour Response	5WS0D73787
4YR Onsite 24x7x4 Hour Response	5WS0D73792
4YR Onsite 9x5x4 Hour Response	5WS0D73791
4YR Onsite NBD	5WS0F15470
3YR Onsite 24x7x4 Hour Response+Priority Support	5WS0F15414
3YR Onsite 9x5x4 Hour Response+Priority Support	5WS0F15423
3YR Priority Support	5WS0E76457
4YR Priority Support	5WS0E76482

Note:

24x7x4: 4 Hour Onsite Response Time in 24x7 Service Window (requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.
- Best coverage for business critical work loads

9x5x4: 4 Hour Onsite Response Time in 9x5 Service Window (requires Location Activation)

- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.

24x7x8: 8 Hour Onsite Response Time in 24x7 Service Window (requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 8 hours.

Priority Technical Support

Lenovo's Priority Technical Support provides direct access to an advanced level technician supporting all of hardware, operating system and software needs related to server issues, available 24 hours a day, 7 days a week.

Keep Your Drive (KYD) Service

Retain drive (hard drive or SSD) and confidential data if the drive must be replaced.

To confirm if 4hr services are available in a specified location, please use ThinkServer

Service Availability Tool: http://www.lenovo.com/services_warranty/us/en/locator.html

Once purchased, to activate the location of your 4hr/8hr ThinkServer Service, please use

ThinkServer Service Activation page: <http://www.lenovo.com/activation>

ThinkServer RD330 Photography - 3.5" disk bays

ThinkServer™



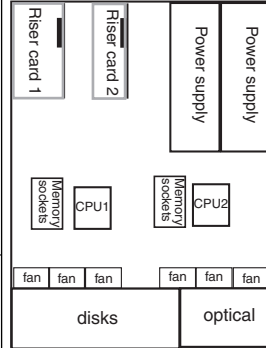
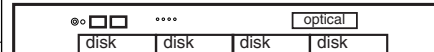
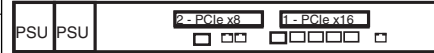
ThinkServer RD330 Photography - 2.5" disk bays

ThinkServer™



ThinkServer RD330 with 3.5" Disk Bay (4304) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty							
4304-E1U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300		4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1							
4304-E2U	1xE5-2403	1333MHz RDIMM	1x4GB	No	300		4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1							
4304-E3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500		4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1							
4304-E4U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500	4x1TB 3.5" SATA	4xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	2							
4304-E5U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade		4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	2							
4304-E6U	2xE5-2420	1333MHz RDIMM	2x8GB	No	500+Upgrade		4xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	1							
4304-E7U	1xE5-2420	1333MHz RDIMM	1x16GB	No	500		4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	2							
4304-E8U	1xE5-2403	1333MHz RDIMM	1x4GB	No	500+Upgrade		4xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	1							
Limited warranty	3-year parts and labor; more services information see S-RAL sheet								<div>1U Rack top</div> <div></div> <div>Front</div> <div></div> <div>Rear</div> <div></div> <div>Mechanical</div> <div><ul style="list-style-type: none">1U rack19"W x 28.9"D x 1.72"H (with rack handles)482.4mm W x 734mm D x 43.6mm H (with rack handles)17kg (37.5 lb) when fully configured</div> <div>Disk Bays</div> <div><table><tr><td>Bay 1</td><td>5.25", 0.5" high, external,</td><td>for optical</td></tr><tr><td>Bay 2-5</td><td>3.5", 1" high, external,</td><td>for disk</td></tr></table></div> <div>Expansion Slots</div> <div><p>Slot 1: half-length, full-height, PCI Express 3.0 x16</p><p>Slot 2: Low Profile, PCI Express 3.0 x8*</p><p>* x4 elec for single processor model, x8 elec for dual processors model</p></div> <div>Security</div> <div><ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)</div> <div>Software Management Tools</div> <div><ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage</div> <div>Energy Management Technology</div> <div><ul style="list-style-type: none">Lenovo® SmartGrid Manager</div> <div>ENERGY STAR® Server 1.1-compliant</div> <div>RoHS-compliant</div> <div>For more accessories, see O-RAL sheet</div>							Bay 1	5.25", 0.5" high, external,	for optical	Bay 2-5	3.5", 1" high, external,	for disk	
Bay 1	5.25", 0.5" high, external,	for optical																				
Bay 2-5	3.5", 1" high, external,	for disk																				
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz) Two LGA1356 sockets																					
Implementation	Two LGA1356 sockets																					
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)																					
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported																					
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200 @60Hz																					
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays (see right)																					
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700																					
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter																					
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm																					
Tape drive	None																					
Optical	DVD±RW or DVD ROM, slim																					
Diskette	None (use USB port)																					
Chipset	Intel C606 Chipset																					
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2																					
Riser card	Two USB 2.0																					
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector																					
Rear ports																						
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; Basic: IDM LED lights indicate failing component category																					
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions																					
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant																					
Prerequisites	SATA/SAS disk, OS																					
Keyboard/mouse	None (use USB port)																					
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies																					
Rack kit	Includes rack kit																					
Cable management	Optional cable management arm on selected models																					
Cooling	Six fans, non-hot swap																					

ThinkServer RD330 with 3.5" Disk Bay (4304) - TopSeller (June 2013)

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
4304-F5U	1xE5-2407	1600MHz RDIMM	1x8GB	No	300	2x1TB 3.5" SATA	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1

Limited warranty	3-year parts and labor; more services information see S-RAL sheet														
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz)														
Implementation	Two LGA1356 sockets														
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over six DIMMs requires dual processors Mixing of UDIMM, RDIMM, or LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays (see right)														
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter														
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C606 Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2														
Riser card	Two USB 2.0														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Rear ports															
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; Basic: IDM LED lights indicate failing component category														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Six fans, non-hot swap														

1U Rack top

Front

Rear

Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1	5.25", 0.5" high, external,	for optical
Bay 2-5	3.5", 1" high, external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8*

* x4 elec for single processor model, x8 elec for dual processors model

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant

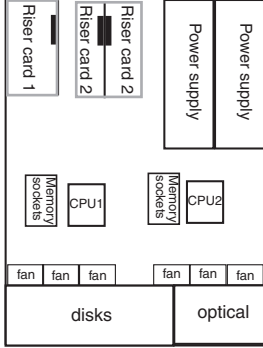
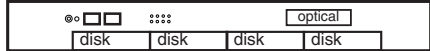
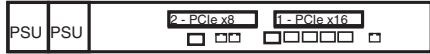
RoHS-compliant

For more accessories, see O-RAL sheet

ThinkServer RD330 with 3.5" Disk Bay (4305)

Product Specifications Reference (PSREF)

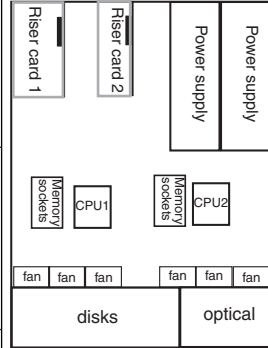
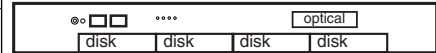
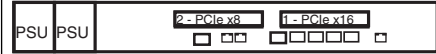
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
4305-B1U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300	No	4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
4305-B2U	1xE5-2403	1333MHz RDIMM	1x8GB	No	300	No	4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
4305-B3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	300	No	4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
4305-B4U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade	No	4xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	1
4305-B5U	1xE5-2450	1333MHz RDIMM	1x16GB	No	500+Upgrade	No	4xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	2

Limited warranty	3-year parts and labor; more warranty information see S-RAL sheet														
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1), Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1), Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz) Two LGA1356 sockets														
Implementation	Two LGA1356 sockets														
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over six DIMMs requires dual processors Mixing of UDIMM, RDIMM, or LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200 @60Hz														
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays (see right)														
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter														
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C606 Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2														
Riser card	Two USB 2.0														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Rear ports															
Intelligent Diagnostics Module (IDM)	Supports IDM on selected model; Basic: IDM LED lights indicate failing component category														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Cable: contains cable management arm														
Cooling	Six fans, non-hot swap														
							1U Rack top 								
							Front 								
							Rear 								
							Mechanical <ul style="list-style-type: none"> 1U rack 19"W x 28.9"D x 1.72"H (with rack handles) 482.4mm W x 734mm D x 43.6mm H (with rack handles) 17kg (37.5 lb) when fully configured 								
							Disk Bays Bay 1 5.25", 0.5" high, external, for optical Bay 2-5 3.5", 1" high, external, for disk								
							Expansion Slots Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8* * x4 elec for single processor model, x8 elec for dual processors model								
							Security <ul style="list-style-type: none"> Security chip (selected models, see information on left) Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) 								
							Software Management Tools <ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage 								
							Energy Management Technology <ul style="list-style-type: none"> Lenovo® SmartGrid Manager 								
							ENERGY STAR® Server 1.1-compliant RoHS-compliant								
							For more accessories, see O-RAL sheet								

ThinkServer RD330 with 3.5" Disk Bay (4305) - September 2012

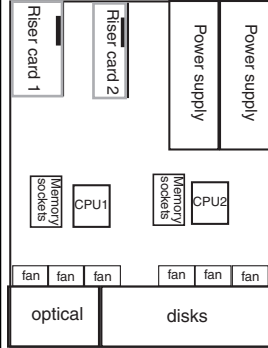
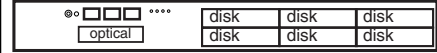
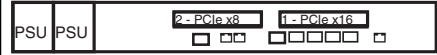
Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Memory Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
4305-F2U	1xE5-2407	1600MHz RDIMM	1x4GB	No	300		4xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
4305-F3U	1xE5-2407	1600MHz RDIMM	4x8GB	No	700+Battery	3x500GB 3.5" SATA	4xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	2
4305-F4U	1xE5-2420	1600MHz RDIMM	6x8GB	No	700+Battery	3x300GB 3.5" SAS	4xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	2

Limited warranty	3-year parts and labor; more services information see S-RAL sheet																						
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Two LGA1356 sockets																						
Implementation	Two LGA1356 sockets																						
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)																						
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported																						
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz																						
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays (see right)																						
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700																						
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter																						
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm																						
Tape drive	None																						
Optical	DVD±RW or DVD ROM, slim																						
Diskette	None (use USB port)																						
Chipset	Intel C606 Chipset																						
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2																						
Riser card	Two USB 2.0																						
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector																						
Rear ports																							
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; Basic: IDM LED lights indicate failing component category																						
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions																						
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant																						
Prerequisites	SATA/SAS disk, OS																						
Keyboard/mouse	None (use USB port)																						
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies																						
Rack kit	Includes rack kit																						
Cable management	Optional cable management arm on selected models																						
Cooling	Six fans, non-hot swap																						
1U Rack top 																							
Front 																							
Rear 																							
Mechanical <ul style="list-style-type: none">1U rack19"W x 28.9"D x 1.72"H (with rack handles)482.4mm W x 734mm D x 43.6mm H (with rack handles)17kg (37.5 lb) when fully configured																							
Disk Bays <table><tr><td>Bay 1</td><td>5.25"</td><td>0.5" high, external,</td><td>for optical</td></tr><tr><td>Bay 2-5</td><td>3.5",</td><td>1" high,</td><td>external, for disk</td></tr></table>																Bay 1	5.25"	0.5" high, external,	for optical	Bay 2-5	3.5",	1" high,	external, for disk
Bay 1	5.25"	0.5" high, external,	for optical																				
Bay 2-5	3.5",	1" high,	external, for disk																				
Expansion Slots <p>Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8*</p> <p><i>* x4 elec for single processor model, x8 elec for dual processors model</i></p>																							
Security <ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)																							
Software Management Tools <ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage																							
Energy Management Technology <ul style="list-style-type: none">Lenovo® SmartGrid Manager																							
ENERGY STAR® Server 1.1-compliant RoHS-compliant																							
For more accessories, see O-RAL sheet																							

ThinkServer RD330 with 2.5" Disk Bay (3073) - TopSeller

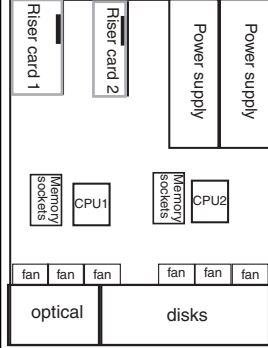
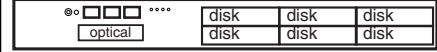
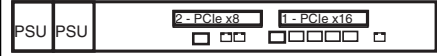
Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3073-C1U	1xE5-2403	1333MHz RDIMM	1x4GB	No	300		6xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
3073-C2U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300		6xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
3073-C3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500		6xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
3073-C4U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade		6xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	2
3073-C5U	2xE5-2420	1333MHz RDIMM	2x8GB	No	500+Upgrade		6xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	1
3073-C6U	2xE5-2420	1333MHz RDIMM	2x8GB	No	500+Upgrade	2x200G SSD	6xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	2
3073-C7U	1xE5-2420	1333MHz RDIMM	1x16GB	No	500		6xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	2
3073-C8U	1xE5-2450	1333MHz RDIMM	1x8GB	No	300		6xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
Limited warranty	3-year parts and labor; more services information see S-RAL sheet														
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1), Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1), Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)														
Implementation	Two LGA1356 sockets														
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over six DIMMs requires dual processors Mixing of UDIMM, RDIMM, or LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Six 2.5" hot-swap SATA/SAS disk bays (see right)														
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50 via ThinkServer RAID 700 adapter														
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C606 Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2														
Riser card	One analog VGA DB-15 connector, two USB 2.0														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45),														
Rear ports	one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; Basic: IDM LED lights indicate failing component category														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Six fans, non-hot swap														
								1U Rack top							
															
								Front							
															
								Rear							
															
								Mechanical							
								<ul style="list-style-type: none"> 1U rack 19"W x 28.9"D x 1.72"H (with rack handles) 482.4mm W x 734mm D x 43.6mm H (with rack handles) 17kg (37.5 lb) when fully configured 							
								Disk Bays							
								Bay 1 5.25", 0.5" high, external, for optical Bay 2-7 2.5", 0.6" high, external, for disk							
								Expansion Slots							
								Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8* * x4 elec for single processor model, x8 elec for dual processors model							
								Security							
								<ul style="list-style-type: none"> Security chip (selected models, see information on left) Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) 							
								Software Management Tools							
								<ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage 							
								Energy Management Technology							
								<ul style="list-style-type: none"> Lenovo® SmartGrid Manager 							
								ENERGY STAR® Server 1.1-compliant RoHS-compliant							
								For more accessories, see O-RAL sheet							

ThinkServer RD330 with 2.5" Disk Bay (3074)

Product Specifications Reference (PSREF)

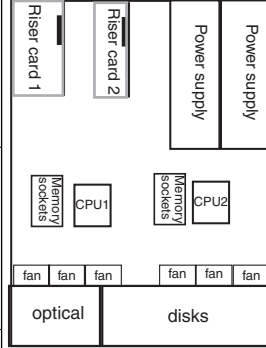

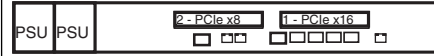
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3074-D1U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3074-D2U	1xE5-2403	1333MHz RDIMM	1x8GB	No	300	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
3074-D3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	300	None	6xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2
3074-D4U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade	None	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	1
3074-D5U	1xE5-2450	1333MHz RDIMM	1x16GB	No	500+Upgrade	None	6xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2

Limited warranty	3-year parts and labor; more services information see S-RAL sheet														
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1), Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1), Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)														
Implementation	Two LGA1356 sockets														
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over six DIMMs requires dual processors Mixing of UDIMM, RDIMM, or LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Six 2.5" hot-swap SATA/SAS disk bays (see right)														
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50 via ThinkServer RAID 700 adapter														
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C606 Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2														
Riser card	One analog VGA DB-15 connector, two USB 2.0														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Rear ports															
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; Basic: IDM LED lights indicate failing component category														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Six fans, non-hot swap														
							1U Rack top 								
							Front 								
							Rear 								
							Mechanical <ul style="list-style-type: none"> 1U rack 19"W x 28.9"D x 1.72"H (with rack handles) 482.4mm W x 734mm D x 43.6mm H (with rack handles) 17kg (37.5 lb) when fully configured 								
							Disk Bays Bay 1 5.25", 0.5" high, external, for optical Bay 2-7 2.5", 0.6" high, external, for disk								
							Expansion Slots Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8* * x4 elec for single processor model, x8 elec for dual processors model								
							Security <ul style="list-style-type: none"> Security chip (selected models, see information on left) Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) 								
							Software Management Tools <ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage 								
							Energy Management Technology <ul style="list-style-type: none"> Lenovo® SmartGrid Manager 								
							ENERGY STAR® Server 1.1-compliant RoHS-compliant								
							For more accessories, see O-RAL sheet								

ThinkServer RD330 with 2.5" Disk Bay (3074) - September 2012

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3074-D6U	1xE5-2407	1600MHz RDIMM	1x4GB	No	300		6xHS	SATA/SAS DVD±RW	No	TPM	IPMI	No	No	No	1
3074-D7U	1xE5-2407	1600MHz RDIMM	4x8GB	No	700+Battery	3x300GB 2.5" SAS	6xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	2
3074-D8U	1xE5-2420	1600MHz RDIMM	6x8GB	No	700+Battery	3x300GB 2.5" SAS	6xHS	SATA/SAS DVD±RW	No	TPM	iKVM	No	No	No	2

Limited warranty	3-year parts and labor; more services information see S-RAL sheet			<div>1U Rack top</div> <div></div> <div>Front</div> <div></div> <div>Rear</div> <div></div> <div>Mechanical</div> <div><ul style="list-style-type: none">1U rack19"W x 28.9"D x 1.72"H (with rack handles)482.4mm W x 734mm D x 43.6mm H (with rack handles)17kg (37.5 lb) when fully configured</div> <div>Disk Bays</div> <div><table><tr><td>Bay 1</td><td>5.25"</td><td>0.5" high, external,</td><td>for optical</td></tr><tr><td>Bay 2-7</td><td>2.5"</td><td>0.6" high, external,</td><td>for disk</td></tr></table></div> <div>Expansion Slots</div> <div><p>Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8*</p><p><small>* x4 elec for single processor model, x8 elec for dual processors model</small></p></div> <div>Security</div> <div><ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)</div> <div>Software Management Tools</div> <div><ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage</div> <div>Energy Management Technology</div> <div><ul style="list-style-type: none">Lenovo® SmartGrid Manager</div> <div>ENERGY STAR® Server 1.1-compliant RoHS-compliant</div> <div>For more accessories, see O-RAL sheet</div>			Bay 1	5.25"	0.5" high, external,	for optical	Bay 2-7	2.5"	0.6" high, external,	for disk
Bay 1	5.25"	0.5" high, external,	for optical											
Bay 2-7	2.5"	0.6" high, external,	for disk											
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Two LGA1356 sockets													
Implementation	Two LGA1356 sockets													
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB) <ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported													
Additional memory disclaimers														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz													
Disk bays	Six 2.5" hot-swap SATA/SAS disk bays (see right)													
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700													
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50 via ThinkServer RAID 700 adapter													
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"													
Tape drive	None													
Optical	DVD±RW or DVD ROM, slim													
Diskette	None (use USB port)													
Chipset	Intel C606 Chipset													
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2													
Riser card	One analog VGA DB-15 connector, two USB 2.0													
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector													
Rear ports														
Intelligent Diagnostics Module (IDM)	Supports IDM on selected models; Basic: IDM LED lights indicate failing component category													
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions													
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	SATA/SAS disk, OS													
Keyboard/mouse	None (use USB port)													
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies													
Rack kit	Includes rack kit													
Cable management	Optional cable management arm on selected models													
Cooling	Six fans, non-hot swap													

ThinkServer RD430 Photography - Eight 3.5" disk bays

ThinkServer™



ThinkServer RD430 Photography - Twelve 3.5" disk bays

ThinkServer



ThinkServer RD430 Photography - 2.5" disk bays

ThinkServer™

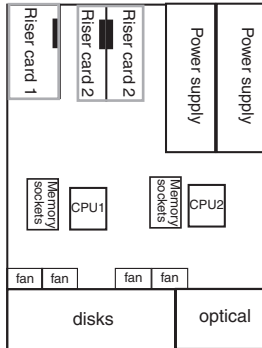
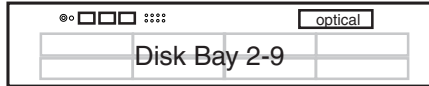



** Some models in pictures above contain optional add-in ethernet adapter or RAID adapter;
some RD430 with 2.5" disk bay models may come with 8 disk bays*

ThinkServer RD430 with eight 3.5" Disk Bays (3064) - TopSeller

Product Specifications Reference (PSREF)

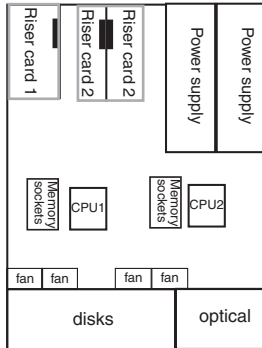
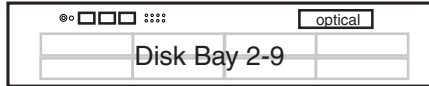

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3064-G2U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300	No	8xHS	SATA/SAS	DVD±RW	Basic	TPM	IPMI	No	No	1
3064-G3U	1xE5-2403	1333MHz RDIMM	1x4GB	No	300	No	8xHS	SATA/SAS	DVD±RW	Basic	TPM	IPMI	No	No	1
3064-G4U	1xE5-2420	1333MHz RDIMM	1x8GB	No	300	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	IPMI	No	No	1
3064-G5U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
3064-G6U	2xE5-2420	1333MHz RDIMM	2x16GB	No	700+Battery	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2

Limited warranty	3-year parts and labor; more services information see S-RAL sheet		2U Rack top	
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1), Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1), Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz) Two LGA1356 sockets			
Implementation	Two LGA1356 sockets		Front 	
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)		Rear 	
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported		Slot 4, 5 are available on dual processors models only	
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz			
Disk bays	Eight 3.5" hot-swap SATA/SAS disk bays (see right)			
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700			
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter			
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm			
Tape drive	None			
Optical	DVD±RW or DVD ROM, slim			
Diskette	None (use USB port)			
Chipset	Intel C606 Chipset			
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5			
Riser card	One analog VGA DB-15 connector, two USB 2.0			
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector			
Rear ports				
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models; Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part			
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions			
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant			
Prerequisites	SATA/SAS disk, OS			
Keyboard/mouse	None (use USB port)			
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies			
Rack kit	Includes rack kit			
Cable management	Optional cable management arm on selected models			
Cooling	Four fans, hot-swap			
			Mechanical <ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured	
			Disk Bays Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 3.5", 1" high, external, for disk	
			Expansion Slots Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) <i>Slot 4-5 are available on dual processors models:</i> Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8	
			Security <ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)	
			Software Management Tools <ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage	
			Energy Management Technology <ul style="list-style-type: none">Lenovo® SmartGrid Manager	
			ENERGY STAR® Server 1.1-compliant RoHS-compliant	
			For more accessories, see O-RAL sheet	

ThinkServer RD430 with eight 3.5" Disk Bays (3065)

Product Specifications Reference (PSREF)

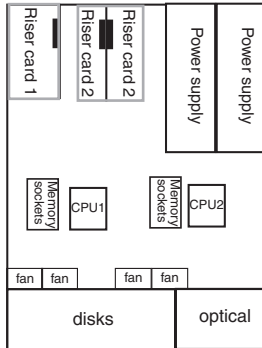
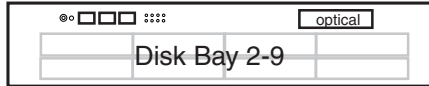

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3065-B1U	1xE5-2403	1333MHz RDIMM	1x4GB	No	300	No	8xHS	SATA/SAS	DVD±RW	Basic	TPM	IPMI	No	No	1
3065-B2U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300	No	8xHS	SATA/SAS	DVD±RW	Basic	TPM	IPMI	No	No	1
3065-B3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500+Upgrade	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
3065-B4U	1xE5-2450	1333MHz RDIMM	1x16GB	No	700+Battery	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
3065-B5U	1xE5-2420	1333MHz RDIMM	1x8GB	No	700+Battery	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2

Limited warranty	3-year parts and labor; more services information see S-RAL sheet		2U Rack top	
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz) Two LGA1356 sockets			
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)			
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported			
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz		Slot 4, 5 are available on dual processors models only	
Disk bays	Eight 3.5" hot-swap SATA/SAS disk bays (see right)			
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700			
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter			
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm			
Tape drive	None			
Optical	DVD±RW or DVD ROM, slim			
Diskette	None (use USB port)			
Chipset	Intel C606 Chipset			
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5			
Riser card	One analog VGA DB-15 connector, two USB 2.0			
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector			
Rear ports				
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models; Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part			
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions			
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant			
Prerequisites	SATA/SAS disk, OS			
Keyboard/mouse	None (use USB port)			
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies			
Rack kit	Includes rack kit			
Cable management	Optional cable management arm on selected models			
Cooling	Four fans, hot-swap			
			Mechanical	
			<ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured	
			Disk Bays	
			Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 3.5", 1" high, external, for disk	
			Expansion Slots	
			Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) <i>Slot 4-5 are available on dual processors models:</i> Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8	
			Security	
			<ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)	
			Software Management Tools	
			<ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage	
			Energy Management Technology	
			<ul style="list-style-type: none">Lenovo® SmartGrid Manager	
			ENERGY STAR® Server 1.1-compliant RoHS-compliant	
			For more accessories, see O-RAL sheet	

ThinkServer RD430 with eight 3.5" Disk Bays (3065) - September 2012

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3065-A3U	1xE5-2420	1600MHz RDIMM	1x8GB	No	300		SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	1
3065-A4U	1xE5-2407	1600MHz RDIMM	4x8GB	No	700+Battery	3x500GB 3.5" SATA	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
3065-A5U	1xE5-2420	1600MHz RDIMM	6x8GB	No	700+Battery	3x300GB 3.5" SAS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2

Limited warranty	3-year parts and labor; more services information see S-RAL sheet			2U Rack top		
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz)					
Implementation	Two LGA1356 sockets			Front 		
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)			Rear 		
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported			Slot 4, 5 are available on dual processors models only		
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz					
Disk bays	Eight 3.5" hot-swap SATA/SAS disk bays (see right)					
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700					
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter					
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm					
Tape drive	None					
Optical	DVD±RW or DVD ROM, slim					
Diskette	None (use USB port)					
Chipset	Intel C606 Chipset					
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5					
Riser card	One analog VGA DB-15 connector, two USB 2.0					
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector					
Rear ports						
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models; Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part					
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions					
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant					
Prerequisites	SATA/SAS disk, OS					
Keyboard/mouse	None (use USB port)					
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					
Rack kit	Includes rack kit					
Cable management	Optional cable management arm on selected models					
Cooling	Four fans, hot-swap					
				Mechanical <ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured		
				Disk Bays Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 3.5", 1" high, external, for disk		
				Expansion Slots Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) <i>Slot 4-5 are available on dual processors models:</i> Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8		
				Security <ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)		
				Software Management Tools <ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage		
				Energy Management Technology <ul style="list-style-type: none">Lenovo® SmartGrid Manager		
				ENERGY STAR® Server 1.1-compliant RoHS-compliant		
				For more accessories, see O-RAL sheet		

ThinkServer RD430 with eight 3.5" Disk Bays (3065) - October 2012

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3065-K1U	1xE5-2450	1600MHz RDIMM	1x8GB	No	300	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	1

Limited warranty	3-year parts and labor; more services information see S-RD sheet														
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)														
Implementation	Two LGA1356 sockets														
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over six DIMMs requires dual processors Mixing of UDIMM, RDIMM, or LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Eight 3.5" hot-swap SATA/SAS disk bays (see right)														
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter														
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C606 Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management														
Riser card	(See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Front ports	One analog VGA DB-15 connector, two USB 2.0														
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models; Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Four fans, hot-swap														

2U Rack top

Front

Rear

Slot 4, 5 are available on dual processors models only

Mechanical		<ul style="list-style-type: none"> 2U rack 19"W x 28.9"D x 3.45"H (with rack handles) 482.4mm W x 734mm D x 87.6mm H (with rack handles) 26.5 kg (58.42 lb) when fully configured
Disk Bays		Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 3.5", 1" high, external, for disk
Expansion Slots		Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) <i>Slot 4-5 are available on dual processors models:</i> Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8
Security		<ul style="list-style-type: none"> Security chip (selected models, see information on left) Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all)
Software Management Tools		<ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage
Energy Management Technology		<ul style="list-style-type: none"> Lenovo® SmartGrid Manager
ENERGY STAR® Server 1.1-compliant		RoHS-compliant
		For more accessories, see O-RAL sheet

ThinkServer RD430 with twelve 3.5" Disk Bays (3057) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3057-E1U	1xE5-2403	1333MHz RDIMM	1x4GB	No	500+Upgrade		12xHS	SATA/SAS	No	No	TPM	IPMI	No	No	1
3057-E2U	1xE5-2407	1333MHz RDIMM	1x4GB	No	500+Upgrade		12xHS	SATA/SAS	No	No	TPM	IPMI	No	No	1
3057-E3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500+Upgrade		12xHS	SATA/SAS	No	No	TPM	IPMI	No	No	1
3057-E4U	1xE5-2450	1333MHz RDIMM	1x8GB	No	500+Upgrade		12xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
3057-E5U	2xE5-2420	1333MHz RDIMM	2x16GB	No	700+Battery		12xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
3057-E6U	2xE5-2420	1333MHz RDIMM	2x16GB	No	700+Battery	6x1TB 3.5" SATA	12xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2

Limited warranty **3-year** parts and labor; more services information see S-RAL sheet

Processor
Up to two Intel® Xeon® E5-2400 series processors,
Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1),
3-channel DDR3 memory controller (up to 1066MHz)
Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1),
3-channel DDR3 memory controller (up to 1066MHz)
Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1),
Turbo Boost 2.0 (up to 2.4GHz),
3-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1),
Turbo Boost 2.0 (up to 2.9GHz),
3-channel DDR3 memory controller (up to 1600MHz)
Implementation
Two LGA1356 sockets

Memory
UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor,
240-pin, 12 DIMM sockets (6 sockets per processor);
192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)

Additional memory disclaimers

- Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs
- Over six DIMMs requires dual processors
- Mixing of UDIMM, RDIMM, or LV RDIMM is not supported

Graphics
Onboard Aspeed AST2300 graphics/management processor,
one VGA DB-15 on rear;
Maximum resolution: 1920x1200@60Hz

Disk bays
Twelve 3.5" hot-swap SATA/SAS disk bays (see right)
Disk controller
RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i),
PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s,
RAID 0, 1, 10 support
Upgrade for 500: Additional upgrade key for RAID 500 adapter,
add RAID 5, 50 support
RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i),
PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s,
RAID 0, 1, 5, 6, 10, 50, 60 support
Battery for 700: Intelligent Battery Backup Unit (IBBU08) for RAID 700
RAID Support
Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter

Disk(s)
3.5" SATA: SATA 6.0Gb/s, 7200 rpm
3.5" SAS: SAS 6.0Gb/s, 15000 rpm

Tape drive
None
Optical
None (use USB port)
Diskette
None (use USB port)

Chipset
Intel C606 Chipset

Ethernet
Two Gigabit Ethernet ports by Intel i350,
one Gigabit Ethernet port by Intel 82574L, dedicate/share management
(See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5

Riser card
Front ports
Two USB 2.0
Rear ports
Four USB 2.0, one serial (9-pin), two ethernet (RJ-45),
one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector

Intelligent Diagnostics Module (IDM)
None

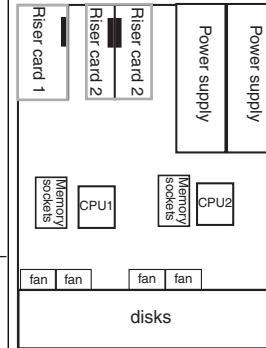
Systems mgmt
Onboard Aspeed AST2300 graphics/management processor,
IPMI 2.0-compliant baseboard management controller (BMC);
iKVM: add-on ThinkServer Management Module Premium for iKVM
functions

Security chip
No onboard TPM chip;
TPM: additional add-on card for TPM function, TCG 1.2-compliant

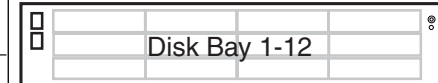
Prerequisites
SATA/SAS disk, OS
Keyboard/mouse
None (use USB port)
Power supply
One or two 800 watts standard, two maximum, rear access, hot-swap,
80 PLUS® Gold qualified, redundant with two power supplies

Rack kit
Includes rack kit
Cable management
Optional cable management arm on selected models
Cooling
Four fans, hot-swap

2U Rack top



Front



Rear



Slot 4, 5 are available on dual processors models only

Mechanical

- 2U rack
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

Disk Bays

Bay 1-12 3.5", 1" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec)
Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec)
Slot 4-5 are available on dual processors models:
Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)
Slot 5: half-length, full-height, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Lenovo® SmartGrid Manager

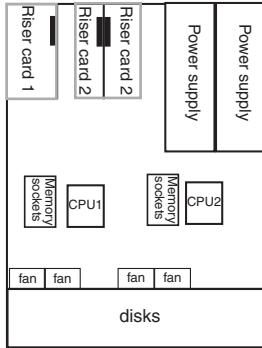
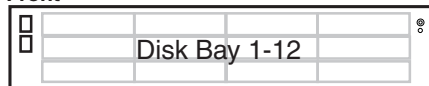
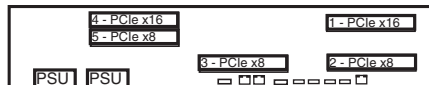
ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RAL sheet

ThinkServer RD430 with twelve 3.5" Disk Bays (3059)

Product Specifications Reference (PSREF)

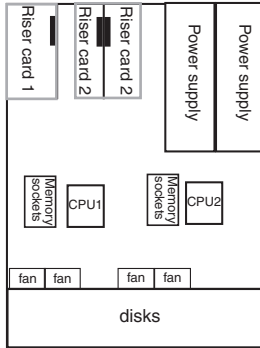
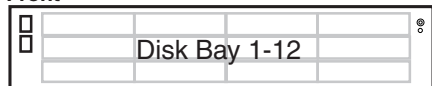
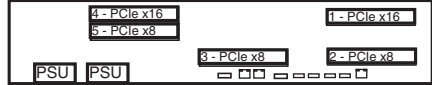
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3059-F1U	1xE5-2420	1333MHz RDIMM	1x8GB	No	700+Battery	None	12xHS	SATA/SAS	No	No	TPM	iPMI	No	No	1
3059-F2U	1xE5-2403	1333MHz RDIMM	1x4GB	No	500+Upgrade	None	12xHS	SATA/SAS	No	No	TPM	iPMI	No	No	1
3059-F3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500+Upgrade	None	12xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
3059-F4U	2xE5-2450	1333MHz RDIMM	2x8GB	No	700+Battery	None	12xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2

Limited warranty	3-year parts and labor; more warranty information see S-RAL sheet																<div>2U Rack top</div> <div></div> <div>Front</div> <div></div> <div>Rear</div> <div></div> <div>Slot 4, 5 are available on dual processors models only</div> <div>Mechanical</div> <div><ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured</div> <div>Disk Bays</div> <div>Bay 1-12 3.5", 1" high, external, for disk</div> <div>Expansion Slots</div> <div>Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) <i>Slot 4-5 are available on dual processors models:</i> Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8</div> <div>Security</div> <div><ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)</div> <div>Software Management Tools</div> <div><ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage</div> <div>Energy Management Technology</div> <div><ul style="list-style-type: none">Lenovo® SmartGrid Manager</div> <div>ENERGY STAR® Server 1.1-compliant RoHS-compliant</div> <div>For more accessories, see O-RAL sheet</div>									
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1), Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1), Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz) Two LGA1356 sockets																									
Implementation	Two LGA1356 sockets																									
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)																									
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported																									
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz																									
Disk bays	Twelve 3.5" hot-swap SATA/SAS disk bays (see right)																									
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support <i>Upgrade for 500:</i> Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support <i>Battery for 700:</i> Intelligent Battery Backup Unit (iBBU08) for RAID 700																									
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter																									
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm																									
Tape drive	None																									
Optical	None (use USB port)																									
Diskette	None (use USB port)																									
Chipset	Intel C606 Chipset																									
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5																									
Riser card	Two USB 2.0																									
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector																									
Rear ports																										
Intelligent Diagnostics Module (IDM)	None																									
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>iKVM:</i> add-on ThinkServer Management Module Premium for iKVM functions																									
Security chip	No onboard TPM chip; <i>TPM:</i> additional add-on card for TPM function, TCG 1.2-compliant																									
Prerequisites	SATA/SAS disk, OS																									
Keyboard/mouse	None (use USB port)																									
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies																									
Rack kit	Includes rack kit																									
Cable management	Optional cable management arm on selected models																									
Cooling	Four fans, hot-swap																									

ThinkServer RD430 with twelve 3.5" Disk Bays (3059) - Sep 2012

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk type	SATA optical	Intelligent Diagnostics	System TPM	Cable mgmt	Preload OS	PSU qty
3059-F6U	1xE5-2420	1600MHz RDIMM	1x8GB	No	700		SATA/SAS	No	No	TPM	iKVM	No	1
3059-F8U	1xE5-2407	1600MHz RDIMM	4x8GB	No	700+Battery	3x500GB 3.5" SATA	SATA/SAS	No	No	TPM	iKVM	No	2
3059-F9U	1xE5-2420	1600MHz RDIMM	6x8GB	No	700+Battery	3x300GB 3.5" SAS	SATA/SAS	No	No	TPM	iKVM	No	2

Limited warranty	3-year parts and labor; more warranty information see S-RAL sheet			<div>2U Rack top</div> <div></div> <div>Front</div> <div></div> <div>Rear</div> <div></div> <div>Slot 4, 5 are available on dual processors models only</div> <div>Mechanical</div> <div><ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured</div> <div>Disk Bays</div> <div>Bay 1-12 3.5", 1" high, external, for disk</div> <div>Expansion Slots</div> <div>Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) Slot 4-5 are available on dual processors models: Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8</div> <div>Security</div> <div><ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)</div> <div>Software Management Tools</div> <div><ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage</div> <div>Energy Management Technology</div> <div><ul style="list-style-type: none">Lenovo® SmartGrid Manager</div> <div>ENERGY STAR® Server 1.1-compliant RoHS-compliant</div> <div>For more accessories, see O-RAL sheet</div>		
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1) , 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz)					
Implementation	Two LGA1356 sockets					
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)					
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported					
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz					
Disk bays	Twelve 3.5" hot-swap SATA/SAS disk bays (see right)					
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700					
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter					
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm					
Tape drive	None					
Optical	None (use USB port)					
Diskette	None (use USB port)					
Chipset	Intel C606 Chipset					
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5					
Riser card	Two USB 2.0					
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector					
Rear ports						
Intelligent Diagnostics Module (IDM)	None					
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions					
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant					
Prerequisites	SATA/SAS disk, OS					
Keyboard/mouse	None (use USB port)					
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					
Rack kit	Includes rack kit					
Cable management	Optional cable management arm on selected models					
Cooling	Four fans, hot-swap					

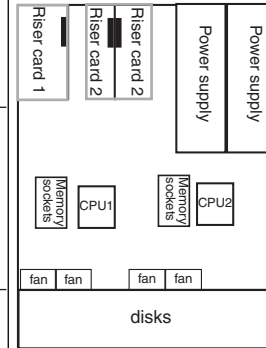
ThinkServer RD430 with twelve 3.5" Disk Bays (3059) - October 2012

Product Specifications Reference (PSREF)

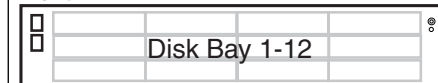
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
3059-K5U	1xE5-2450	1600MHz RDIMM	1x8GB	No	700	No	12xHS	SATA/SAS	No	No	TPM	iKVM	No	No	1

Limited warranty	3-year parts and labor; more warranty information see S-RD sheet														
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1), Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)														
Implementation	Two LGA1356 sockets														
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over six DIMMs requires dual processors Mixing of UDIMM, RDIMM, or LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Twelve 3.5" hot-swap SATA/SAS disk bays (see right)														
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter														
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm														
Tape drive	None														
Optical	None (use USB port)														
Diskette	None (use USB port)														
Chipset	Intel C606 Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management														
Riser card	(See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Front ports	Two USB 2.0														
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Intelligent Diagnostics Module (IDM)	None														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Four fans, hot-swap														

2U Rack top



Front



Rear



Slot 4, 5 are available on dual processors models only

Mechanical

- 2U rack
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

Disk Bays

Bay 1-12 3.5", 1" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec)
 Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec)
Slot 4-5 are available on dual processors models:
 Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)
 Slot 5: half-length, full-height, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Lenovo® SmartGrid Manager

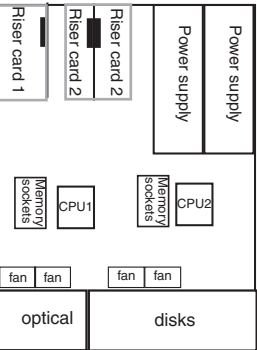
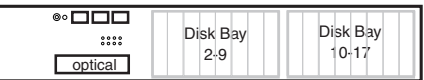

ENERGY STAR® Server 1.1-compliant
 RoHS-compliant

For more accessories, see O-RAL sheet

ThinkServer RD430 with 2.5" Disk Bay (3070) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	Sys mgmt	Cable mgmt	Preload OS	PSU qty
3070-C1U	1xE5-2403	1333MHz RDIMM	1x4GB	No	300		8xHS	SATA/SAS DVD±RW	Basic	TPM	IPMI	No	No	No	1
3070-C2U	1xE5-2407	1333MHz RDIMM	1x4GB	No	300		8xHS	SATA/SAS DVD±RW	Basic	TPM	IPMI	No	No	No	1
3070-C3U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500+Upgrade		8xHS	SATA/SAS DVD±RW	Premium	TPM	IPMI	No	No	No	1
3070-C4U	1xE5-2450	1333MHz RDIMM	1x16GB	No	700+Battery		8xHS	SATA/SAS DVD±RW	Premium	TPM	iKVM	No	No	No	2
3070-C5U	1xE5-2420	1333MHz RDIMM	1x8GB	No	500+Upgrade		16xHS	SATA/SAS DVD±RW	Premium	TPM	iKVM	No	No	No	1
3070-C6U	1xE5-2450	1333MHz RDIMM	1x16GB	No	700+Battery		16xHS	SATA/SAS DVD±RW	Premium	TPM	iKVM	No	No	No	2
3070-C7U	1xE5-2450	1333MHz RDIMM	1x16GB	No	700+Battery	6x300GB 2.5" SAS	16xHS	SATA/SAS DVD±RW	Premium	TPM	iKVM	No	No	No	2
3070-C8U	1xE5-2450	1333MHz RDIMM	1x8GB	No	300		8xHS	SATA/SAS DVD±RW	Premium	TPM	IPMI	No	No	No	1
3070-C9U	1xE5-2450	1333MHz RDIMM	1x8GB	No	700+Battery		8xHS	SATA/SAS DVD±RW	Premium	TPM	iKVM	No	No	No	2

Limited warranty	3-year parts and labor; more services information see S-RAL sheet		2U Rack top	
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2407 processor (4C/4T, 2.2GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1), Turbo Boost 2.0 (up to 2.4GHz), 3-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1), Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)			
Implementation	Two LGA1356 sockets			
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)			
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported			
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz		Front  <i>Bay 10-17 are available on sixteen disk bays models only</i>	
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays (see right)		Rear  <i>Slot 4, 5 are available on dual processors models only</i>	
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700			
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter			
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"			
Tape drive	None			
Optical	DVD±RW or DVD ROM, slim			
Diskette	None (use USB port)			
Chipset	Intel C606 Chipset			
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5			
Riser card	One analog VGA DB-15 connector, two USB 2.0			
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector			
Rear ports				
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models; <i>Basic:</i> IDM LED lights indicate failing component category <i>Premium:</i> IDM Premium LED lights indicate individual failing part			
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>iKVM:</i> add-on ThinkServer Management Module Premium for iKVM functions			
Security chip	No onboard TPM chip; <i>TPM:</i> additional add-on card for TPM function, TCG 1.2-compliant			
Prerequisites	SATA/SAS disk, OS			
Keyboard/mouse	None (use USB port)			
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies			
Rack kit	Includes rack kit			
Cable management	Optional cable management arm on selected models			
Cooling	Four fans, hot-swap			
			Mechanical <ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured	
			Disk Bays Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 2.5", 0.6" high, external, for disk <i>Bay 10-17 are available on sixteen 2.5" disk bays model:</i> Bay 10-17 2.5", 0.6" high, external, for disk	
			Expansion Slots Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) <i>Slot 4-5 are available on dual processors models:</i> Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8	
			Security <ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)	
			Software Management Tools <ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage	
			Energy Management Technology <ul style="list-style-type: none">Lenovo® SmartGrid Manager	
			ENERGY STAR® Server 1.1-compliant RoHS-compliant	
			For more accessories, see O-RAL sheet	

Product Specifications Reference (PSREF)

Limited warranty	3-year parts and labor; more services information see S-RAL sheet
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2403 processor (4C/4T, 1.8GHz, 10MB, 6.4 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1066MHz) Intel Xeon E5-2420 processor (6C/12T, 1.9GHz, 15MB, 7.2 GT/s QPI x1), 3-channel DDR3 memory controller (up to 1333MHz)
Implementation	Two LGA1356 sockets
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays (see right)
Disk controller	RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"
Tape drive	None
Optical	DVD±RW or DVD ROM, slim
Diskette	None (use USB port)
Chipset	Intel C606 Chipset
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5
Riser card	One analog VGA DB-15 connector, two USB 2.0
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Rear ports	
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models; Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant
Prerequisites	SATA/SAS disk, OS
Keyboard/mouse	None (use USB port)
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies
Rack kit	Includes rack kit
Cable management	Optional cable management arm on selected models
Cooling	Four fans, hot-swap

2U Rack top

Front

Bay 10-17 are available on sixteen disk bays models only

Rear

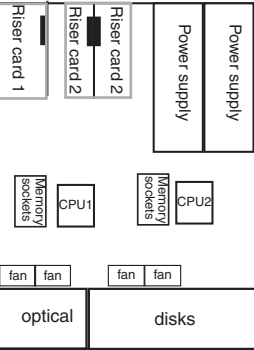
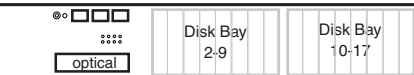
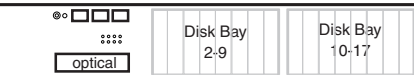
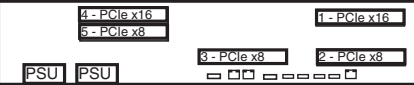
Slot 4, 5 are available on dual processors models only

Mechanical	
<ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured	
Disk Bays	
Bay 1	5.25", 0.5" high, external, for optical
Bay 2-9	2.5", 0.6" high, external, for disk
Bay 10-17 are available on sixteen 2.5" disk bays model:	
Bay 10-17	2.5", 0.6" high, external, for disk
Expansion Slots	
Slot 1: half-length, full-height, PCI Express 3.0 x16	
Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec)	
Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec)	
Slot 4-5 are available on dual processors models:	
Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)	
Slot 5: half-length, full-height, PCI Express 3.0 x8	
Security	
<ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)	
Software Management Tools	
<ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage	
Energy Management Technology	
<ul style="list-style-type: none">Lenovo® SmartGrid Manager	
ENERGY STAR® Server 1.1-compliant RoHS-compliant	
For more accessories, see O-RAL sheet	

ThinkServer RD430 with 2.5" Disk Bay (3071) - October 2012

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	Sys mgmt	Cable mgmt	Preload OS	PSU qty
3071-K4U	1xE5-2450	1600MHz RDIMM	1x8GB	No	300	No	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	1

Limited warranty	3-year parts and labor; more services information see S-RD sheet		2U Rack top	
Processor	Up to two Intel® Xeon® E5-2400 series processors, Intel Xeon E5-2450 processor (8C/16T, 2.1GHz, 20MB, 8.0 GT/s QPI x1) , Turbo Boost 2.0 (up to 2.9GHz), 3-channel DDR3 memory controller (up to 1600MHz)			
Implementation	Two LGA1356 sockets			
Memory	UDIMM, RDIMM or LV RDIMM, DDR3, ECC, 3-channel per processor, 240-pin, 12 DIMM sockets (6 sockets per processor); 192GB max (RDIMM/LV RDIMM, 12x16GB) or 48GB max (UDIMM, 12x4GB)			
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMsOver six DIMMs requires dual processorsMixing of UDIMM, RDIMM, or LV RDIMM is not supported			
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz			
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays (see right)			
Disk controller	<p>RAID 300: Onboard ThinkServer RAID 300 SATA/SAS controller, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 10 support</p> <p>Upgrade for 300: Additional upgrade key for RAID 300, add RAID 5 support</p> <p>RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support</p> <p>Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support</p> <p>RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support</p> <p>Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700</p>		 <p>Bay 10-17 are available on sixteen disk bays models only</p>	
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter			
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"			
Tape drive	None			
Optical	DVD±RW or DVD ROM, slim			
Diskette	None (use USB port)			
Chipset	Intel C606 Chipset			
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5			
Riser card	One analog VGA DB-15 connector, two USB 2.0			
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector			
Rear ports				
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models; <i>Basic:</i> IDM LED lights indicate failing component category <i>Premium:</i> IDM Premium LED lights indicate individual failing part			
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>iKVM:</i> add-on ThinkServer Management Module Premium for iKVM functions			
Security chip	No onboard TPM chip; <i>TPM:</i> additional add-on card for TPM function, TCG 1.2-compliant			
Prerequisites	SATA/SAS disk, OS			
Keyboard/mouse	None (use USB port)			
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies			
Rack kit	Includes rack kit			
Cable management	Optional cable management arm on selected models			
Cooling	Four fans, hot-swap			
			Front	
			 <p>Bay 10-17 are available on sixteen disk bays models only</p>	
			Rear	
			 <p>Slot 4, 5 are available on dual processors models only</p>	
			Mechanical	
			<ul style="list-style-type: none">2U rack19"W x 28.9"D x 3.45"H (with rack handles)482.4mm W x 734mm D x 87.6mm H (with rack handles)26.5 kg (58.42 lb) when fully configured	
			Disk Bays	
			Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 2.5", 0.6" high, external, for disk Bay 10-17 2.5", 0.6" high, external, for disk <i>Bay 10-17 are available on sixteen 2.5" disk bays model:</i>	
			Expansion Slots	
			Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x8 (x4 elec) Slot 3: Low Profile, PCI Express 3.0 x8 (x4 elec) <i>Slot 4-5 are available on dual processors models:</i> Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8	
			Security	
			<ul style="list-style-type: none">Security chip (selected models, see information on left)Administrator passwordUser passwordBoot sequence controlBoot without keyboard, mouse, disketteSerial port I/O controlUSB port disablement (all)	
			Software Management Tools	
			<ul style="list-style-type: none">ThinkServer EasyStartupThinkServer EasyManage	
			Energy Management Technology	
			<ul style="list-style-type: none">Lenovo® SmartGrid Manager	
			ENERGY STAR® Server 1.1-compliant RoHS-compliant	
			For more accessories, see O-RAL sheet	

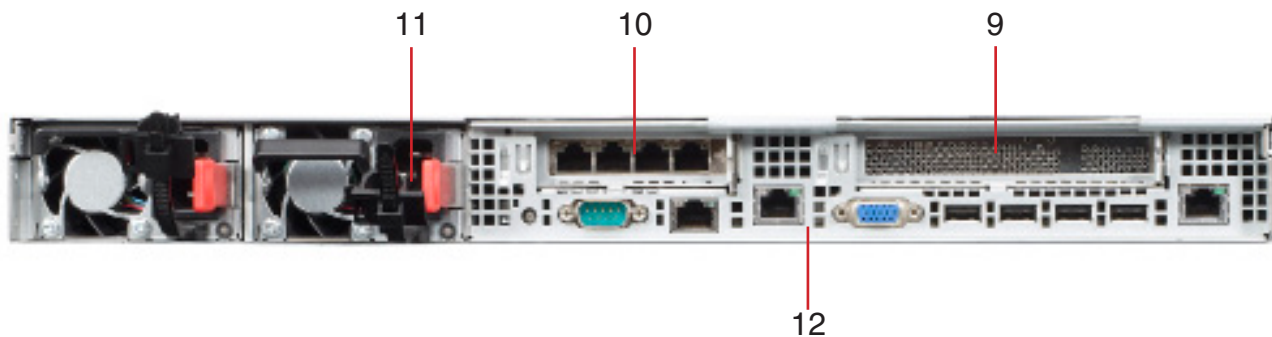
ThinkServer RD540 Overview - Front and Rear



ThinkServer RD540 with 4x3.5" Disk Drive Bays



ThinkServer RD540 with 8x2.5" Disk Drive Bays



Front View

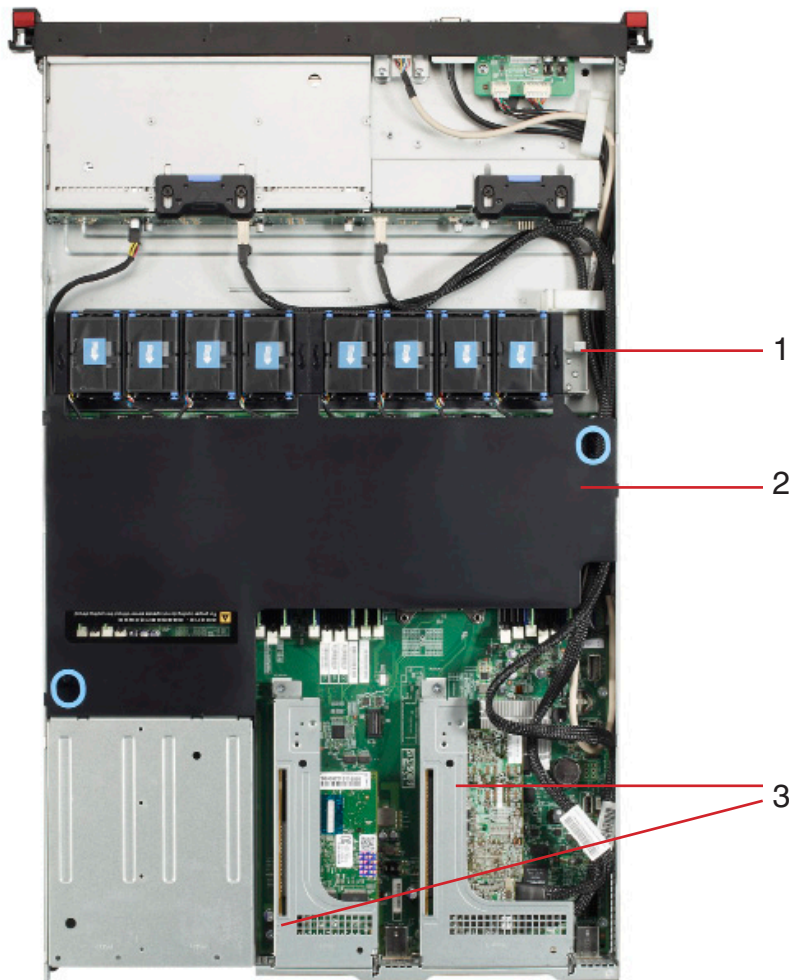
1. Hot-swap disk drive bays
2. Power Button with LED
3. ID button with LED
4. 2 Network interface status LEDs
5. 2 USB 2.0
6. Intelligent Diagnostics Module (optional)
7. Optical (optional, for 3.5" disk drive bay model)
8. VGA (for 2.5" disk drive bay model)

Rear View

9. PCI Express slots 1*
10. PCI Express slots 2*
11. Hot-swap power supplies
12. Rear ports:
 - 4 USB 2.0
 - 1 serial
 - 2 ethernet
 - 1 RJ-45 (dedicate/share mgmt)
 - 1 VGA

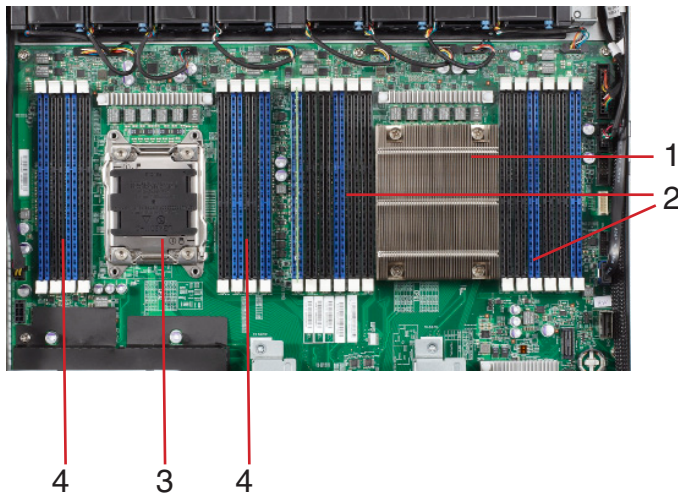
*Adapters are optional

ThinkServer RD540 Overview - Internal



Internal View

1. Non-hot swap cooling fans
2. Processors and memory DIMM sockets (under cooling shroud, see below)
3. PCI Express slots (*Adapters are optional)



Processors and Memory DIMM Sockets (under cooling shroud)

1. CPU 1
2. 12 Memory DIMM sockets for CPU 1
3. CPU 2 (optional)
4. 8 Memory DIMM sockets for CPU 2 (for dual processors model)

ThinkServer RD540 Platform Specifications

Components	Specifications			
Chipset	Intel C602J Chipset			
Mechanical	<ul style="list-style-type: none">• 1U rack• 19"W x 28.9"D x 1.72"H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured			
Front ports	Two USB 2.0, one analog VGA DB-15 connector (for 8x2.5" disk bays models)			
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector			
Expansion Slots	<div><div><div>PSU</div><div>PSU</div></div><div><div>2 - PCIe x8</div><div>1 - PCIe x16</div><div><div></div><div></div><div></div><div></div><div></div><div></div></div></div></div> <p>Two PCI-Express slots via two riser cards, riser card 1 for slot 1, riser card 2 for slot 2 Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8</p>			
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front (for 8x2.5" disk bays models), one VGA DB-15 on rear; <i>Maximum resolution: 1920x1200@60Hz</i>			
Hot-swap parts	Disk drives, power supplies			
Safety, environment, and certifications	Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant		
	EMC	FCC Class A, CSA CE		
	240VA	Supports		
	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)		
	Temperature - non operating (no package)	-10 °C to 60 °C		
	Temperature - non operating (with package)	-40 °C to 70 °C		
	Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)		
	Humidity - operating	8%~80%, non-condensing		
	Humidity - non operating (no package)	8%~80%, non-condensing		
	Humidity - non operating (with package)	8%~90%, non-condensing		
	Acoustic noise (idle/working mode)	Category	Normal Configuration	High Performance Configuration
		CPU	1	2
		HDD	2x 900GB 2.5" SAS 6Gb/s	8x 900GB 2.5" SAS 6Gb/s
		Memory	1x 8GB 1600MHz LVRDIMM	20x 8GB 1600MHz LVRDIMM
		PCIe adapters	I350	I350
PSU		1x 800W	2x 800W	
RAID		RAID 700 adapter	RAID 700 adapter	
Sound Pressure (operating)		38.6 dB(A)	38.7 dB(A)	
Sound Pressure (idle)	39.0 dB(A)	40.0 dB(A)		

ThinkServer RD540 Optional Configurations - Processor and Memory

Rack kit	Included in models																																																																																																																																																																																																																																																																																																																																								
Processor	<p>Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 or Xeon E5-2600 v2 families, up to 8 cores (E5-2600 series)/12 cores (E5-2600 v2 series), two QPI links up to 8.0GT/s each, up to 20MB (E5-2600 series)/30MB (E5-2600 v2 series) cache, integrated 4-channel DDR3 memory controller up to 1600MHz (E5-2600 series)/1866MHz (E5-2600 v2 series).</p> <p>The following processor options are available:</p> <table><tr><th rowspan="2">Processor Number</th><th colspan="8">Processors Specifications*</th><th rowspan="2">Part Number</th></tr><tr><th># of Cores</th><th># of Threads</th><th>Clock Speed</th><th>Max Turbo Frequency</th><th>Cache</th><th>QPI Speed</th><th>Max TDP</th><th>Memory Speed</th></tr><tr><td colspan="10">Intel Xeon E5-2600 Series</td></tr><tr><td>Xeon E5-2680</td><td>8</td><td>16</td><td>2.7 GHz</td><td>3.5 GHz</td><td>20MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1600</td><td>0A89430</td></tr><tr><td>Xeon E5-2670</td><td>8</td><td>16</td><td>2.6 GHz</td><td>3.3 GHz</td><td>20MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1600</td><td>0A89431</td></tr><tr><td>Xeon E5-2667</td><td>6</td><td>12</td><td>2.9 GHz</td><td>3.5 GHz</td><td>15MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1600</td><td>0A89435</td></tr><tr><td>Xeon E5-2665</td><td>8</td><td>16</td><td>2.4 GHz</td><td>3.1 GHz</td><td>20MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1600</td><td>0A89432</td></tr><tr><td>Xeon E5-2660</td><td>8</td><td>16</td><td>2.2 GHz</td><td>3 GHz</td><td>20MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1600</td><td>0A89462</td></tr><tr><td>Xeon E5-2650L</td><td>8</td><td>16</td><td>1.8 GHz</td><td>2.3 GHz</td><td>20MB</td><td>8 GT/s</td><td>70 W</td><td>DDR3-1600</td><td>0A89434</td></tr><tr><td>Xeon E5-2650</td><td>8</td><td>16</td><td>2 GHz</td><td>2.8 GHz</td><td>20MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1600</td><td>0A89433</td></tr><tr><td>Xeon E5-2643</td><td>4</td><td>8</td><td>3.3 GHz</td><td>3.5 GHz</td><td>10MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1600</td><td>0A89440</td></tr><tr><td>Xeon E5-2640</td><td>6</td><td>12</td><td>2.5 GHz</td><td>3 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1333</td><td>0A89436</td></tr><tr><td>Xeon E5-2630L</td><td>6</td><td>12</td><td>2 GHz</td><td>2.5 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>60 W</td><td>DDR3-1333</td><td>0A89439</td></tr><tr><td>Xeon E5-2630</td><td>6</td><td>12</td><td>2.3 GHz</td><td>2.8 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1333</td><td>0A89437</td></tr><tr><td>Xeon E5-2620</td><td>6</td><td>12</td><td>2 GHz</td><td>2.5 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1333</td><td>0A89438</td></tr><tr><td>Xeon E5-2609</td><td>4</td><td>4</td><td>2.4 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1066</td><td>0A89441</td></tr><tr><td>Xeon E5-2603</td><td>4</td><td>4</td><td>1.8 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1066</td><td>0A89442</td></tr><tr><td colspan="10">Intel Xeon E5-2600 v2 Series</td></tr><tr><td>Xeon E5-2697 v2</td><td>12</td><td>24</td><td>2.7 GHz</td><td>3.5 GHz</td><td>30MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1866</td><td>0C19546</td></tr><tr><td>Xeon E5-2695 v2</td><td>12</td><td>24</td><td>2.4 GHz</td><td>3.2 GHz</td><td>30MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1866</td><td>0C19547</td></tr><tr><td>Xeon E5-2690 v2</td><td>10</td><td>20</td><td>3 GHz</td><td>3.6 GHz</td><td>25MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1866</td><td>0C19548</td></tr><tr><td>Xeon E5-2680 v2</td><td>10</td><td>20</td><td>2.8 GHz</td><td>3.6 GHz</td><td>25MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1866</td><td>0C19549</td></tr><tr><td>Xeon E5-2670 v2</td><td>10</td><td>20</td><td>2.5 GHz</td><td>3.3 GHz</td><td>25MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1866</td><td>0C19550</td></tr><tr><td>Xeon E5-2667 v2</td><td>8</td><td>16</td><td>3.3 GHz</td><td>4 GHz</td><td>25MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1866</td><td>0C19553</td></tr><tr><td>Xeon E5-2660 v2</td><td>10</td><td>20</td><td>2.2 GHz</td><td>3 GHz</td><td>25MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1866</td><td>0C19551</td></tr><tr><td>Xeon E5-2650 v2</td><td>8</td><td>16</td><td>2.6 GHz</td><td>3.4 GHz</td><td>20MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1866</td><td>0C19552</td></tr><tr><td>Xeon E5-2650L v2</td><td>10</td><td>20</td><td>1.7 GHz</td><td>2.1 GHz</td><td>25MB</td><td>7.2 GT/s</td><td>70 W</td><td>DDR3-1600</td><td>0C19554</td></tr><tr><td>Xeon E5-2640 v2</td><td>8</td><td>16</td><td>2 GHz</td><td>2.5 GHz</td><td>20MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1600</td><td>0C19555</td></tr><tr><td>Xeon E5-2630 v2</td><td>6</td><td>12</td><td>2.6 GHz</td><td>3.1 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>80 W</td><td>DDR3-1600</td><td>0C19558</td></tr><tr><td>Xeon E5-2630L v2</td><td>6</td><td>12</td><td>2.4 GHz</td><td>2.8 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>60 W</td><td>DDR3-1600</td><td>0C19556</td></tr><tr><td>Xeon E5-2620 v2</td><td>6</td><td>12</td><td>2.1 GHz</td><td>2.6 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>80 W</td><td>DDR3-1600</td><td>0C19557</td></tr><tr><td>Xeon E5-2609 v2</td><td>4</td><td>4</td><td>2.5 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1333</td><td>0C19559</td></tr><tr><td>Xeon E5-2603 v2</td><td>4</td><td>4</td><td>1.8 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1333</td><td>0C19560</td></tr></table> <p><i>Notes:</i> All processors specifications is provided by Intel and may be changed at any time without notice. The information herein is provided “as-is”. Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/</p>	Processor Number	Processors Specifications*								Part Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	QPI Speed	Max TDP	Memory Speed	Intel Xeon E5-2600 Series										Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20MB	8 GT/s	130 W	DDR3-1600	0A89430	Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89431	Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15MB	8 GT/s	130 W	DDR3-1600	0A89435	Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89432	Xeon E5-2660	8	16	2.2 GHz	3 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89462	Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20MB	8 GT/s	70 W	DDR3-1600	0A89434	Xeon E5-2650	8	16	2 GHz	2.8 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89433	Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10MB	8 GT/s	130 W	DDR3-1600	0A89440	Xeon E5-2640	6	12	2.5 GHz	3 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89436	Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	60 W	DDR3-1333	0A89439	Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89437	Xeon E5-2620	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89438	Xeon E5-2609	4	4	2.4 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89441	Xeon E5-2603	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89442	Intel Xeon E5-2600 v2 Series										Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30MB	8 GT/s	130 W	DDR3-1866	0C19546	Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30MB	8 GT/s	115 W	DDR3-1866	0C19547	Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19548	Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19549	Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19550	Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19553	Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25MB	8 GT/s	95 W	DDR3-1866	0C19551	Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20MB	8 GT/s	95 W	DDR3-1866	0C19552	Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25MB	7.2 GT/s	70 W	DDR3-1600	0C19554	Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20MB	7.2 GT/s	95 W	DDR3-1600	0C19555	Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19558	Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15MB	7.2 GT/s	60 W	DDR3-1600	0C19556	Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19557	Xeon E5-2609 v2	4	4	2.5 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19559	Xeon E5-2603 v2	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19560
Processor Number	Processors Specifications*								Part Number																																																																																																																																																																																																																																																																																																																																
	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	QPI Speed	Max TDP	Memory Speed																																																																																																																																																																																																																																																																																																																																	
Intel Xeon E5-2600 Series																																																																																																																																																																																																																																																																																																																																									
Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20MB	8 GT/s	130 W	DDR3-1600	0A89430																																																																																																																																																																																																																																																																																																																																
Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89431																																																																																																																																																																																																																																																																																																																																
Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15MB	8 GT/s	130 W	DDR3-1600	0A89435																																																																																																																																																																																																																																																																																																																																
Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89432																																																																																																																																																																																																																																																																																																																																
Xeon E5-2660	8	16	2.2 GHz	3 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89462																																																																																																																																																																																																																																																																																																																																
Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20MB	8 GT/s	70 W	DDR3-1600	0A89434																																																																																																																																																																																																																																																																																																																																
Xeon E5-2650	8	16	2 GHz	2.8 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89433																																																																																																																																																																																																																																																																																																																																
Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10MB	8 GT/s	130 W	DDR3-1600	0A89440																																																																																																																																																																																																																																																																																																																																
Xeon E5-2640	6	12	2.5 GHz	3 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89436																																																																																																																																																																																																																																																																																																																																
Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	60 W	DDR3-1333	0A89439																																																																																																																																																																																																																																																																																																																																
Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89437																																																																																																																																																																																																																																																																																																																																
Xeon E5-2620	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89438																																																																																																																																																																																																																																																																																																																																
Xeon E5-2609	4	4	2.4 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89441																																																																																																																																																																																																																																																																																																																																
Xeon E5-2603	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89442																																																																																																																																																																																																																																																																																																																																
Intel Xeon E5-2600 v2 Series																																																																																																																																																																																																																																																																																																																																									
Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30MB	8 GT/s	130 W	DDR3-1866	0C19546																																																																																																																																																																																																																																																																																																																																
Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30MB	8 GT/s	115 W	DDR3-1866	0C19547																																																																																																																																																																																																																																																																																																																																
Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19548																																																																																																																																																																																																																																																																																																																																
Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19549																																																																																																																																																																																																																																																																																																																																
Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19550																																																																																																																																																																																																																																																																																																																																
Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19553																																																																																																																																																																																																																																																																																																																																
Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25MB	8 GT/s	95 W	DDR3-1866	0C19551																																																																																																																																																																																																																																																																																																																																
Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20MB	8 GT/s	95 W	DDR3-1866	0C19552																																																																																																																																																																																																																																																																																																																																
Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25MB	7.2 GT/s	70 W	DDR3-1600	0C19554																																																																																																																																																																																																																																																																																																																																
Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20MB	7.2 GT/s	95 W	DDR3-1600	0C19555																																																																																																																																																																																																																																																																																																																																
Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19558																																																																																																																																																																																																																																																																																																																																
Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15MB	7.2 GT/s	60 W	DDR3-1600	0C19556																																																																																																																																																																																																																																																																																																																																
Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19557																																																																																																																																																																																																																																																																																																																																
Xeon E5-2609 v2	4	4	2.5 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19559																																																																																																																																																																																																																																																																																																																																
Xeon E5-2603 v2	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19560																																																																																																																																																																																																																																																																																																																																
Memory type	1600MHz, RDIMM and LV RDIMM, DDR3, 4-channel per processor, 240-pin																																																																																																																																																																																																																																																																																																																																								
Memory DIMM sockets	twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)																																																																																																																																																																																																																																																																																																																																								
Memory capacity	Up to 320GB (16GBx20)																																																																																																																																																																																																																																																																																																																																								
Memory protection	ECC, memory mirroring, memory sparing																																																																																																																																																																																																																																																																																																																																								
Memory options	<table><tr><th>Memory options</th><th>Part Number</th></tr><tr><td>ThinkServer 4GB DDR3L-1600MHz (1RX8) RDIMM</td><td>0C19533</td></tr><tr><td>ThinkServer 8GB DDR3L-1600MHz (2RX8) RDIMM</td><td>0C19534</td></tr><tr><td>ThinkServer 16GB DDR3L-1600MHz (2RX4) RDIMM</td><td>0C19535</td></tr></table> <p><i>Notes:</i> ● Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs ● By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting ● When using Intel Xeon E5-2600 series processors, LV RIMM is needed to run at 1.5V to support all 20 memory DIMM sockets. If LV RIMM runs at 1.35V, only 16 memory DIMM sockets are functional (8 of 12 for CPU 1, 8 for CPU 2)</p>	Memory options	Part Number	ThinkServer 4GB DDR3L-1600MHz (1RX8) RDIMM	0C19533	ThinkServer 8GB DDR3L-1600MHz (2RX8) RDIMM	0C19534	ThinkServer 16GB DDR3L-1600MHz (2RX4) RDIMM	0C19535																																																																																																																																																																																																																																																																																																																																
Memory options	Part Number																																																																																																																																																																																																																																																																																																																																								
ThinkServer 4GB DDR3L-1600MHz (1RX8) RDIMM	0C19533																																																																																																																																																																																																																																																																																																																																								
ThinkServer 8GB DDR3L-1600MHz (2RX8) RDIMM	0C19534																																																																																																																																																																																																																																																																																																																																								
ThinkServer 16GB DDR3L-1600MHz (2RX4) RDIMM	0C19535																																																																																																																																																																																																																																																																																																																																								

ThinkServer RD540 Optional Configurations - Storage and RAID

Disk drive bays	Supports one of the following configurations: <ul style="list-style-type: none"> • 8 x 3.5" SAS/SATA disk drive bays • 8 x 2.5" SAS/SATA disk drive bays • 16 x 2.5" SAS/SATA disk drive bays 						
Disk drive options	Disk drive options						Part Number
	Hot-swap Disk drive for 3.5" bay						
	3.5" SATA Hard Drive						
	ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89473
	ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89474
	ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89475
	ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89477
	ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0C19520
	3.5" SAS Hard Drive						
	ThinkServer 3.5" 1TB 7.2K SAS 6Gbps Hot Swap Hard Drive						0C19530
	ThinkServer 3.5" 2TB 7.2K SAS 6Gbps Hot Swap Hard Drive						0C19531
	ThinkServer 3.5" 3TB 7.2K SAS 6Gbps Hot Swap Hard Drive						0C19532
	ThinkServer 3.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive						67Y2616
	ThinkServer 3.5" 600GB 15K SAS 6Gbps Hot Swap Hard Drive						67Y2618
	2.5" SSD for 3.5" disk bay						
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive to 3.5" Kit						0C19571
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive to 3.5" Kit						0C19572
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive to 3.5" Kit						0C19573
	Hot-swap Disk drive for 2.5" bay						
	2.5" SATA Hard Drive						
	ThinkServer 2.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0C19495
	ThinkServer 2.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0C19496
	2.5" SAS Hard Drive						
	ThinkServer 2.5" 300GB 10K SAS 6Gbps Hot Swap Hard Drive						67Y2619
	ThinkServer 2.5" 600GB 10K SAS 6Gbps Hot Swap Hard Drive						67Y2621
	ThinkServer 2.5" 900GB 10K SAS 6Gbps Hot Swap Hard Drive						0A89409
	ThinkServer 2.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive						0C19494
	2.5" SSD						
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive						0A89420
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive						0A89418
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive						0A89419
RAID support	RAID adapter	RAID support	Device Support	Cache	Host bus type	Data transfer rates (per port)	Optional upgrades
	ThinkServer RAID 500 (LSI® SAS 9240-8i)	0, 1, 10	SAS/SATA		PCI Express	6Gb/s	optional upgrade key, add RAID 5, 50 support
	ThinkServer RAID 700 (LSI SAS 9260-8i)	0, 1, 10, 5, 50, 6, 60	SAS/SATA	512MB	PCI Express	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)
	ThinkServer RAID 710 (LSI SAS 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	SAS/SATA	1GB	PCI Express	6Gb/s	• optional CacheVault flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath
RAID options	RAID controller and RAID upgrade options						Part Number
	ThinkServer RAID 500 Adapter II						0A89464
	ThinkServer RAID 500 Upgrade Key for Advanced RAID						0A89407
	ThinkServer RAID 700 Adapter II						0A89463
	ThinkServer RAID 700 Battery						67Y2647
	ThinkServer RAID 710 Adapter						0C19489
	ThinkServer RAID 710 Super Capacitor Module (CacheVault)						0C19490
	ThinkServer RAID 710 FastPath Software Key						0C19491
	ThinkServer RAID 710 CacheCade Pro 2.0 Software Key						0C19492

ThinkServer RD540 Optional Configurations - Network, System Management, Power Supply

Network options	Network and HBA options		Part Number
	ThinkServer 1 Gbps Ethernet I350-T2 Server Adapter by Intel		0C19506
	ThinkServer 1 Gbps Ethernet I350-T4 Server Adapter by Intel		0C19507
	Lenovo 10Gbps Ethernet X540-T2 Server Adapter by Intel		0C19497
	Lenovo 10Gbps Ethernet X520-DA2 Server Adapter by Intel		0C19486
	Lenovo 10Gbps Ethernet Fiber Module by Intel		0C19488
	Lenovo 10Gbps Ethernet X520-SR2 Server Adapter by Intel		0C19487
	ThinkServer QLE8242-CU-CK Dual Port CNA by QLogic		0C19483
	HBA		
	ThinkServer LPe1250 Single Port 8Gb Fibre Channel HBA by Emulex		0C19476
	ThinkServer LPe12002 Dual Port 8Gb Fibre Channel HBA by Emulex		0C19478
Security options	Trusted Platform Module options		Part Number
	ThinkServer Trusted Platform Module		0A89428
Systems management options for iKVM	System Management options		Part Number
	ThinkServer Management Module Premium		67Y2624
Power supply options	Power supply options		Part Number
	ThinkServer 800W Gold Hot Swap Redundant Power Supply for Rack		4X20E54690

ThinkServer RD540 Services Upgrade Options

Partial list of Lenovo Services for ThinkServer RD540 with 3-year onsite base warranty models

For more information see: http://www.lenovo.com/services_warranty/us/en/lenovo-warranty.html

Upgrade Service Description	Part Number
Warranty	
3YR Onsite 24x7x4 Hour Response	5WS0F15458
3YR Onsite 24x7x8 Hour Response	5WS0F15392
3YR Onsite 9x5x4 Hour Response	5WS0F15355
4YR Onsite 24x7x4 Hour Response	5WS0F15443
4YR Onsite 24x7x8 Hour Response	5WS0F15395
4YR Onsite 9x5x4 Hour Response	5WS0F15394
4YR Onsite NBD	5WS0F15415
5YR Onsite 24x7x4 Hour Response	5WS0F15377
5YR Onsite 24x7x8 Hour Response	5WS0F15440
5YR Onsite 9x5x4 Hour Response	5WS0F15430
5YR Onsite NBD	5WS0F15419
Keep Your Drive (KYD) Service	
3YR Keep Your Drive	5PS0F15436
3YR Onsite 24x7x4 Hour Response + KYD	5PS0F15376
3YR Onsite 24x7x8 Hour Response + KYD	5PS0F15349
3YR Onsite 9x5x4 Hour Response + KYD	5PS0F15448
4YR Onsite 24x7x4 Hour Response + KYD	5PS0F15389
4YR Onsite 24x7x8 Hour Response + KYD	5PS0F15359
4YR Onsite 9x5x4 Hour Response + KYD	5PS0F15456
4YR Onsite NBD + KYD	5PS0F15459
5YR Onsite 24x7x4 Hour Response + KYD	5PS0F15402
5YR Onsite 24x7x8 Hour Response + KYD	5PS0F15381
5YR Onsite 9x5x4 Hour Response + KYD	5PS0F15366
5YR Onsite NBD + KYD	5PS0F15391
Priority Technical Support	
3YR KYD + Priority Support	5PS0F15417
3YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15352
3YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15399
3YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15444
3YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15418
3YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15398
3YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15468
3YR Priority Support	5WS0E76471
4YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15462
4YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15410
4YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15433
4YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15425
4YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15400
4YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15351
4YR Onsite NBD + KYD + Priority Support	5PS0F15373
4YR Onsite NBD + Priority Support	5WS0F15401
4YR Priority Support	5WS0E77170
5YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15350
5YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15412
5YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15471
5YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15447
5YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15437
5YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15382
5YR Onsite NBD + KYD + Priority Support	5PS0F15388
5YR Onsite NBD + Priority Support	5WS0F15463
5YR Priority Support	5WS0E77173
Post Warranty	
1YR Onsite 24x7x4 Hour Response	5WS0F15435
1YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15370
1YR Onsite 24x7x8 Hour Response	5WS0F15427
1YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15361
1YR Onsite 9x5x4 Hour Response	5WS0F15416
1YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15348
1YR Onsite NBD	5WS0F15407
1YR Onsite NBD + Priority Support	5WS0F15465
TopSeller Priority (TopSeller models only)	
3YR Onsite 24x7x4 Hour Response	5WS0D73789
3YR Onsite 9x5x4 Hour Response	5WS0D73787
4YR Onsite 24x7x4 Hour Response	5WS0D73792
4YR Onsite 9x5x4 Hour Response	5WS0D73791
4YR Onsite NBD	5WS0F15470
3YR Onsite 24x7x4 Hour Response+Priority Support	5WS0F15414
3YR Onsite 9x5x4 Hour Response+Priority Support	5WS0F15423
3YR Priority Support	5WS0E76457
4YR Priority Support	5WS0E76482

Note:

24x7x4: 4 Hour Onsite Response Time in 24x7 Service Window

(requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.
- Best coverage for business critical work loads

9x5x4: 4 Hour Onsite Response Time in 9x5 Service Window

(requires Location Activation)

- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.

24x7x8: 8 Hour Onsite Response Time in 24x7 Service Window

(requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 8 hours.

Priority Technical Support

Lenovo's Priority Technical Support provides direct access to an advanced level technician supporting all of hardware, operating system and software needs related to server issues, available 24 hours a day, 7 days a week.

Keep Your Drive (KYD) Service

Retain drive (hard drive or SSD) and confidential data if the drive must be replaced.

To confirm if 4hr services are available in a specified location, please use ThinkServer Service Availability Tool:

http://www.lenovo.com/services_warranty/us/en/locator.html

Once purchased, to activate the location of your 4hr/8hr ThinkServer Service, please use ThinkServer Service Activation page: <http://www.lenovo.com/activation>

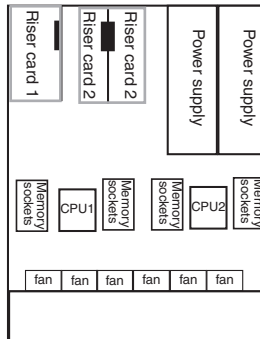
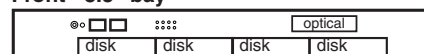
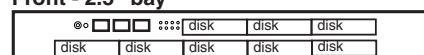
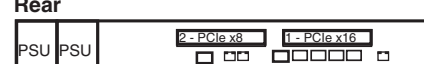
ThinkServer RD540 (70AT) - TopSeller

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AT0004UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	4x3.5"	RAID710	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3
70AT0008UX	1xE5-2603 v2 4C/1.8GHz/ 10MB/1333MHz	4GBx1	4x3.5"	RAID500	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3
70AT0009UX	1xE5-2609 v2 4C/2.5GHz/ 10MB/1333MHz	8GBx1	4x3.5"	RAID500	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3
70AT000BUX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	4x3.5"	RAID700	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3
70AT000CUX	1xE5-2650L v2 10C/1.7GHz/ 25MB/1600MHz	8GBx1	4x3.5"	RAID700	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3
70AT000AUX	1xE5-2609 v2 4C/2.5GHz/ 10MB/1333MHz	8GBx1	4x3.5"	RAID700	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3
70AT0006UX	2xE5-2630 v2 6C/2.6GHz/ 15MB/1600MHz	16Gx4	4x3.5"	RAID700 +Battery	3x500GB 3.5" SATA(RAID5)	DVD	No	iKVM	350T4	Cable	800Wx2	No	1
70AT0005US	2xE5-2650 v2 8C/2.6GHz/ 20MB/1866MHz	4GBx20	4x3.5"	RAID710 +CacheVault +CacheCade	2x400GB SSD(cache,RAID1) +2x3TB 3.5" SAS (RAID1)	DVD±RW	No	iKVM	X520SR2	Cable	800Wx2	Standard	1

1. Model in italics is Global 2. 8 x 2.5" disk bays models do not support optical bay, external USB optical is needed

- For detailed platform specifications, please see [ThinkServer RD540 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD540, please see [ThinkServer RD540 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					2U Rack top				
Memory type	1600MHz, RDIMM and LV RDIMM, DDR3, 4-channel per processor, 240-pin									
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)									
Memory protection	ECC, memory mirroring, memory sparing									
Disk drive bays	Supports 4 x 3.5" or 8 x 2.5" disk drive bays									
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades					
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support					
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)					
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	• optional CacheVault (CV) flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath key					
* All RAID adapters supports SAS and SATA drives ** RAID 50 and 60 are supported on 8x2.5" disk bays models						Front - 3.5" bay				
Optical (optional)	4x3.5" bay models: one DVD±RW or DVD ROM, slim, SATA interface 8x2.5" bay models: no optical bay, use optional external USB optical									
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management					Front - 2.5" bay				
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter									
						Rear				
Intelligent Diagnostics Module (IDM, opt)	Supports IDM on selected models, IDM LED lights indicate failing component category,									
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)					Front and Rear Ports				
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate					Front: 2 USB 2.0 1 VGA (for 8x2.5" disk bays models)				
						Rear: 4 USB 2.0 1 serial (9-pin) 2 ethernet (RJ-45) 1 RJ-45 (dedicate/share mgmt) 1 VGA				
Cable mgmt (opt)	Optional cable management arm on selected models					Expansion Slots				
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8				
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, see ThinkServer RD540 Platform Specifications					Mechanical				
						<ul style="list-style-type: none">• 1U rack• 19"W x 28.9"D x 1.72"H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured				

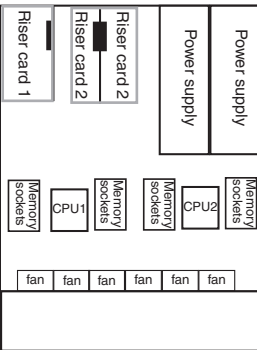
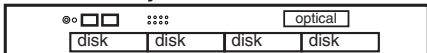
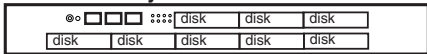
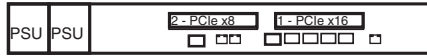
See footnotes for important warranty information
Model(s) announced October 29, 2013

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(70AT-1) October 2013

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AU000CUX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x2.5"	RAID500	Open	No	No	IPMI	No	No	800Wx1	No	3
70AU000SUX	1xE5-2609 v2 4C/2.5GHz/ 10MB/1333MHz	8GBx1	8x2.5"	RAID700	Open	No	No	IPMI	No	No	800Wx1	No	3
70AU000TUX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x2.5"	RAID700	Open	No	No	IPMI	No	No	800Wx1	No	3
70AU000UUX	1xE5-2640 v2 8C/2GHz/ 20MB/1600MHz	8GBx1	8x2.5"	RAID700	Open	No	No	IPMI	No	No	800Wx1	No	3
70AU000VUX	1xE5-2650 v2 8C/2.6GHz/ 20MB/1866MHz	8GBx1	8x2.5"	RAID700	Open	No	No	IPMI	No	No	800Wx1	No	3
70AU000WUX	1xE5-2690 v2 10C/3GHz/ 25MB/1866MHz	8GBx1	8x2.5"	RAID700	Open	No	No	IPMI	No	No	800Wx1	No	3

1. Model in *italics* is Global 2. 8 x 2.5" disk bays models do not support optical bay, external USB optical is needed

- For detailed platform specifications, please see [ThinkServer RD540 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD540, please see [ThinkServer RD540 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					2U Rack top 
Memory type	1600MHz, RDIMM and LV RDIMM, DDR3, 4-channel per processor, 240-pin					
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)					
Memory protection	ECC, memory mirroring, memory sparing					
Disk drive bays	Supports 4 x 3.5" or 8 x 2.5" disk drive bays					
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades	Front - 3.5" bay 
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support	
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)	
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	• optional CacheVault (CV) flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath key	
* All RAID adapters supports SAS and SATA drives ** RAID 50 and 60 are supported on 8x2.5" disk bays models						Front - 2.5" bay 
Optical (optional)	4x3.5" bay models: one DVD±RW or DVD ROM, slim, SATA interface 8x2.5" bay models: no optical bay, use optional external USB optical					
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management					Rear 
Discrete network (optional)	<ul style="list-style-type: none">Intel Ethernet Server Adapter I350-T2Intel Ethernet Server Adapter I350-T4Intel 10Gbps Ethernet X520-SR2 Server adapterIntel 10Gbps Ethernet X520-DA2 Server adapterIntel 10Gbps Ethernet Fiber Module for X520-DA2 adapterIntel 10Gbps Ethernet X540-T2 Server adapter					
Intelligent Diagnostics Module (IDM, opt)	Supports IDM on selected models, IDM LED lights indicate failing component category,					Front and Rear Ports Front: 2 USB 2.0 1 VGA (for 8x2.5" disk bays models) Rear: 4 USB 2.0 1 serial (9-pin) 2 ethernet (RJ-45) 1 RJ-45 (dedicate/share mgmt) 1 VGA
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)					
Systems management (Optional iKVM)	<ul style="list-style-type: none">Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functionsControl Panel LEDs shows the status of power, ID, network, systemLenovo SmartGrid ManagerThinkServer EasyStartup/EasyManage/EasyUpdate					Expansion Slots Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8
Cable mgmt (opt)	Optional cable management arm on selected models					
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					Mechanical <ul style="list-style-type: none">1U rack19"W x 28.9"D x 1.72"H (with rack handles)482.4mm W x 734mm D x 43.6mm H (with rack handles)17kg (37.5 lb) when fully configured
Environmental certifications	<ul style="list-style-type: none">Energy Star Server 2.0 qualifiedRoHS-compliant More environmental information and requirements, see ThinkServer RD540 Platform Specifications					

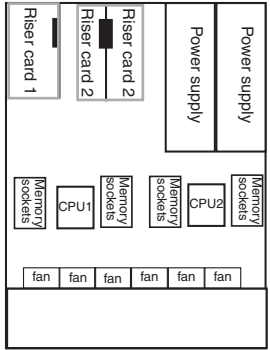
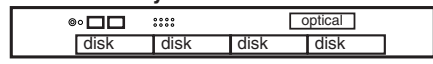
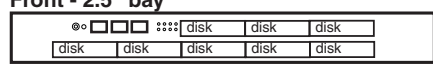
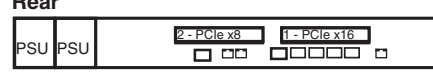
ThinkServer RD540 (70AU) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AU000XUX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x2.5"	RAID710 +CacheVault	Open	No	No	iKVM	No	No	800Wx2	No	3
70AU000YUX	1xE5-2670 v2 10C/2.5GHz/ 25MB/1866MHz	8GBx1	8x2.5"	RAID710 +FastPath	Open	No	No	iKVM	No	No	800Wx2	No	3
70AU000FUX	2xE5-2690 v2 10C/3GHz/ 25MB/1866MHz	4GBx2	8x2.5"	RAID700	2x500GB 2.5" SATA(RAID1)	No	No	IPMI	350T2	No	800Wx2	No	1
70AU000DUS	2xE5-2660 v2 10C/2.2GHz/ 25MB/1866MHz	8GBx20	8x2.5"	RAID500 +upgrade	2x300GB 2.5" SAS(RAID1) +6x300GB 2.5" SAS(RAID50)	No	No	iKVM	X520SR2	Cable	800Wx2	Standard	1
70AU000EUX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	16Gx4	8x2.5"	RAID710 +FastPath	6x100GB SSD(RAID50)	No	No	IPMI	350T4	No	800Wx2	No	1

1. Model in italics is Global 2. 8 x 2.5" disk bays models do not support optical bay, external USB optical is needed

- For detailed platform specifications, please see [ThinkServer RD540 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD540, please see [ThinkServer RD540 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					2U Rack top							
Memory type	1600MHz, RDIMM and LV RDIMM, DDR3, 4-channel per processor, 240-pin												
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)												
Memory protection	ECC, memory mirroring, memory sparing												
Disk drive bays	Supports 4 x 3.5" or 8 x 2.5" disk drive bays												
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades								
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support								
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)								
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none"> • optional CacheVault (CV) flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath key 								
* All RAID adapters supports SAS and SATA drives ** RAID 50 and 60 are supported on 8x2.5" disk bays models						Front - 3.5" bay							
													
						Front - 2.5" bay							
													
						Rear							
													
						Front and Rear Ports							
						Front: 2 USB 2.0 1 VGA (for 8x2.5" disk bays models) Rear: 4 USB 2.0 1 serial (9-pin) 2 ethernet (RJ-45) 1 RJ-45 (dedicate/share mgmt) 1 VGA							
						Expansion Slots							
						Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8							
						Mechanical							
						<ul style="list-style-type: none"> • 1U rack • 19"W x 28.9"D x 1.72"H (with rack handles) • 482.4mm W x 734mm D x 43.6mm H (with rack handles) • 17kg (37.5 lb) when fully configured 							

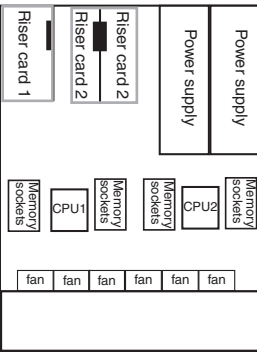
See footnotes for important warranty information
Model(s) announced October 29, 2013

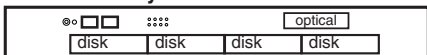
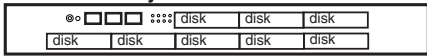
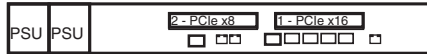
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(70AU-2) October 2013

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AR0000UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	4x3.5"	RAID500	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3
70AR0001UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	4x3.5"	RAID500	Open	DVD±RW	No	IPMI	No	No	800Wx1	No	3

1. Model in italics is Global 2. 8 x 2.5" disk bays models do not support optical bay, external USB optical is needed

- For detailed platform specifications, please see [ThinkServer RD540 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD540, please see [ThinkServer RD540 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					2U Rack top 									
Memory type	1600MHz, RDIMM and LV RDIMM, DDR3, 4-channel per processor, 240-pin														
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)														
Memory protection	ECC, memory mirroring, memory sparing														
Disk drive bays	Supports 4 x 3.5" or 8 x 2.5" disk drive bays														
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades										
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support										
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)										
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	• optional CacheVault (CV) flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath key										
* All RAID adapters supports SAS and SATA drives ** RAID 50 and 60 are supported on 8x2.5" disk bays models															
Optical (optional)	4x3.5" bay models: one DVD±RW or DVD ROM, slim, SATA interface 8x2.5" bay models: no optical bay, use optional external USB optical														
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management														
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter														
Intelligent Diagnostics Module (IDM, opt)	Supports IDM on selected models, IDM LED lights indicate failing component category,														
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)														
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate														
Cable mgmt (opt)	Optional cable management arm on selected models														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, see ThinkServer RD540 Platform Specifications														

Front - 3.5" bay 									
Front - 2.5" bay 									
Rear 									
Front and Rear Ports Front: 2 USB 2.0 1 VGA (for 8x2.5" disk bays models) Rear: 4 USB 2.0 1 serial (9-pin) 2 ethernet (RJ-45) 1 RJ-45 (dedicate/share mgmt) 1 VGA									
Expansion Slots Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: Low Profile, PCI Express 3.0 x8									
Mechanical <ul style="list-style-type: none">• 1U rack• 19"W x 28.9"D x 1.72"H (with rack handles)• 482.4mm W x 734mm D x 43.6mm H (with rack handles)• 17kg (37.5 lb) when fully configured									

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AS0008UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x2.5"	RAID500	Open	No	No	IPMI	No	No	800Wx1	No	3
70AS000GUX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x2.5"	RAID700	Open	No	No	iKVM	No	No	800Wx1	No	3

1. Model in *italics* is Global 2. 8 x 2.5" disk bays models do not support optical bay, external USB optical is needed

- For detailed platform specifications, please see [ThinkServer RD540 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD540, please see [ThinkServer RD540 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors				
Memory type	1600MHz, RDIMM and LV RDIMM, DDR3, 4-channel per processor, 240-pin				
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)				
Memory protection	ECC, memory mirroring, memory sparing				
Disk drive bays	Supports 4 x 3.5" or 8 x 2.5" disk drive bays				
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	• optional CacheVault (CV) flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath key
* All RAID adapters supports SAS and SATA drives ** RAID 50 and 60 are supported on 8x2.5" disk bays models					
Optical (optional)	4x3.5" bay models: one DVD±RW or DVD ROM, slim, SATA interface 8x2.5" bay models: no optical bay, use optional external USB optical				
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management				
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter				
Intelligent Diagnostics Module (IDM, opt)	Supports IDM on selected models, IDM LED lights indicate failing component category,				
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)				
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate				
Cable mgmt (opt)	Optional cable management arm on selected models				
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies				
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, see ThinkServer RD540 Platform Specifications				

2U Rack top

The diagram shows the internal layout of the 2U Rack top. It includes two riser cards (Riser card 1 and Riser card 2), two power supplies, memory sockets for CPU1 and CPU2, and six fans.

Front - 3.5" bay

The diagram shows the front view of the 3.5-inch bay. It includes an optical drive and four disk drives.

Front - 2.5" bay

The diagram shows the front view of the 2.5-inch bay. It includes four disk drives.

Rear

The diagram shows the rear view of the server. It includes two power supplies (PSU), two PCIe x8 slots, and one PCIe x16 slot.

Front and Rear Ports

Front: 2 USB 2.0
1 VGA (for 8x2.5" disk bays models)
Rear: 4 USB 2.0
1 serial (9-pin)
2 ethernet (RJ-45)
1 RJ-45 (dedicate/share mgmt)
1 VGA

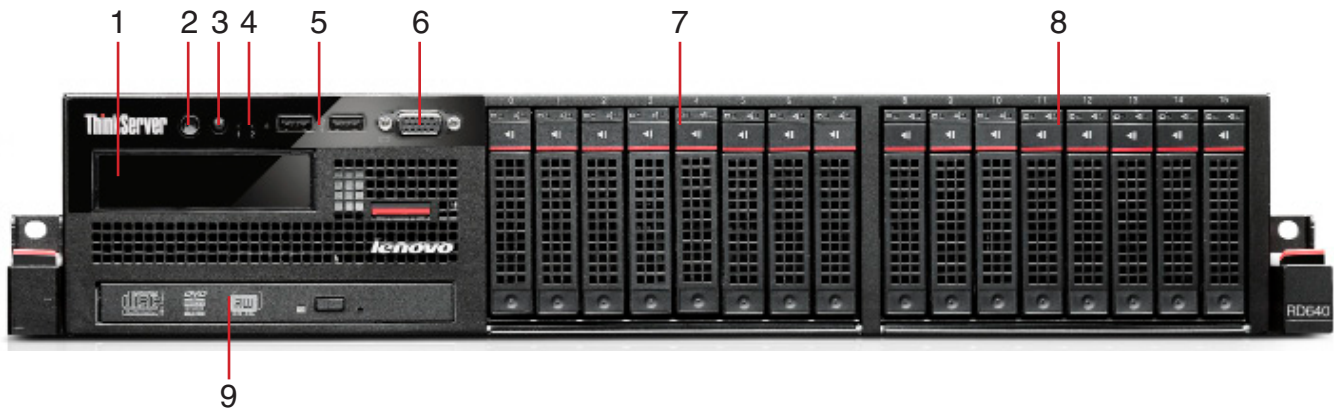
Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8

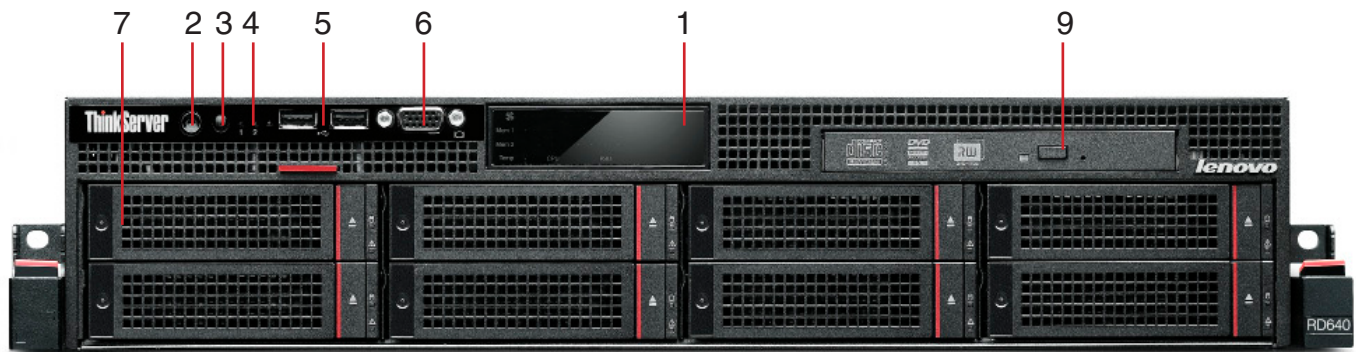
Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

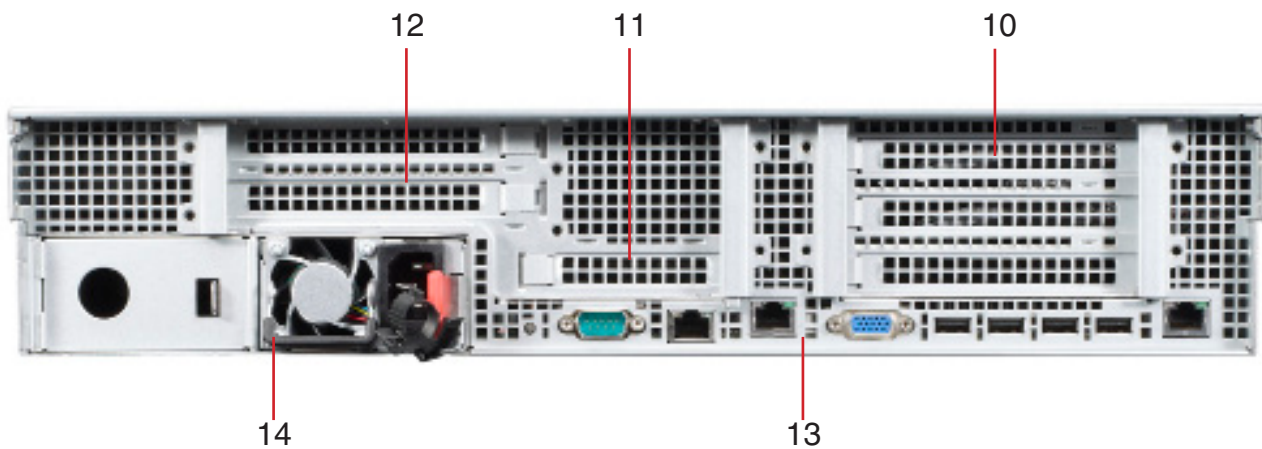
ThinkServer RD640 Overview - Front and Rear



ThinkServer RD640 with 8x2.5"/16x2.5" Disk Drive Bays



ThinkServer RD640 with 8x3.5" Disk Drive Bays



Front View

Rear View

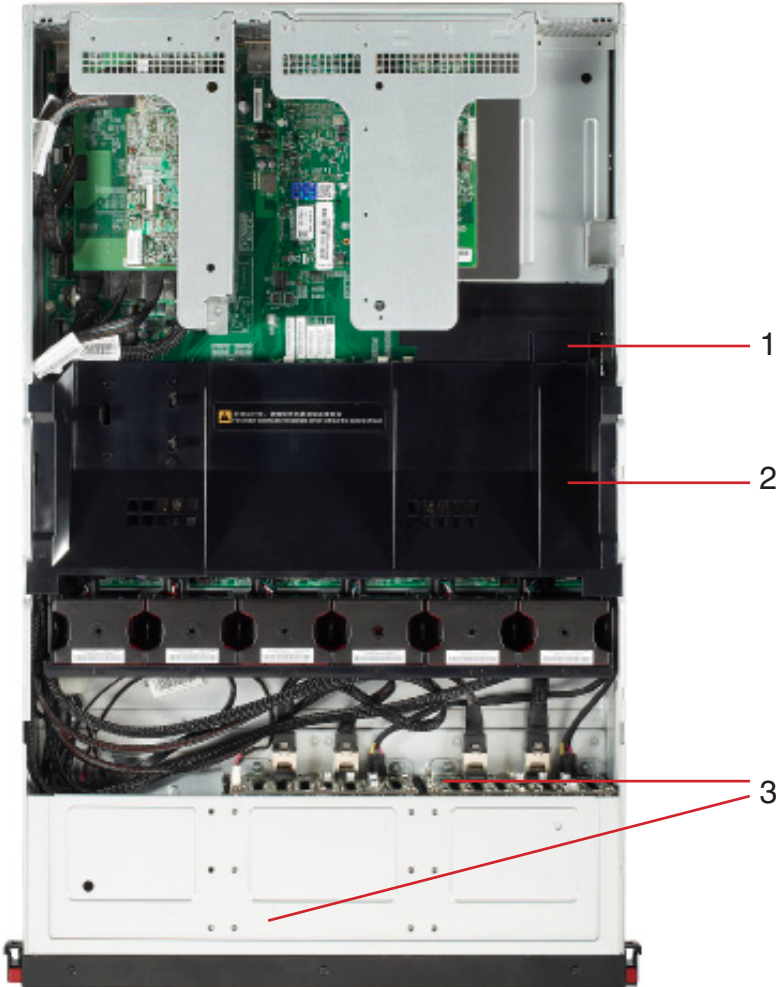
1. Intelligent Diagnostics Premium Module (optional)
2. Power Button with LED
3. ID button with LED
4. 2 Network interface status LEDs
5. 2 USB 2.0
6. 1 VGA
7. Hot-swap disk drive bays
8. Hot-swap disk drive bays for 16x2.5" hard drive bays model
9. Optical (optional)

10. PCI Express slots 1-3
11. PCI Express slots 4
12. PCI Express slots 5-6 (for dual processors model)
13. Rear ports:
 - 4 USB 2.0
 - 1 serial
 - 2 ethernet
 - 1 RJ-45 (dedicate/share mgmt)
 - 1 VGA
14. Hot-swap power supplies

ThinkServer RD640 Overview - Internal

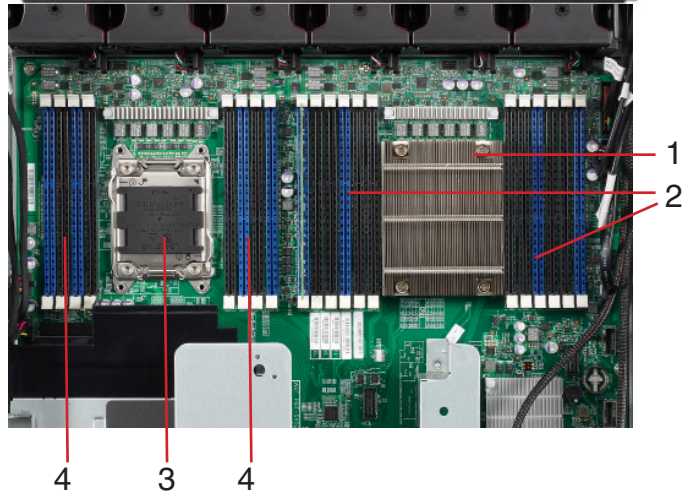
Internal View

1. Hot-swap cooling fans
2. Processors and memory DIMM sockets (under cooling shroud, see below)
3. PCI Express slots

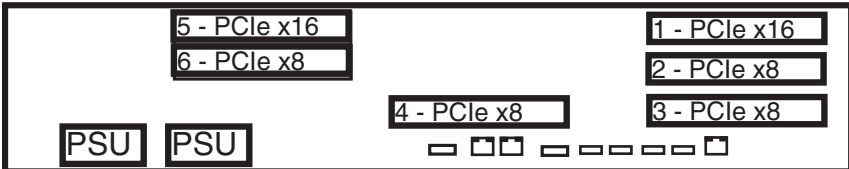


Processors and Memory DIMM Sockets (under cooling shroud)

1. CPU 1
2. 12 Memory DIMM sockets for CPU 1
3. CPU 2 (optional)
4. 8 Memory DIMM sockets for CPU 2 (for dual processors model)



ThinkServer RD640 Platform Specifications

Components	Specifications		
Chipset	Intel C602J Chipset		
Mechanical	<ul style="list-style-type: none"> • 2U rack with rail kit • 19"W x 28.9"D x 3.45"H (with rack handles) • 482.4mm W x 734mm D x 87.6mm H (with rack handles) • 26.5 kg (58.42 lb) when fully configured 		
Front ports	Two USB 2.0, one analog VGA DB-15 connector		
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector		
Expansion Slots	 <p>Up to six PCI-Express slots via two riser cards, riser card 1 for slot 1-3, riser card 2 for slot 4-6 Slot 1: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCI Express 3.0 x8 Slot 3: half-length, full-height, PCI Express 3.0 x8 Slot 4: Low Profile, PCI Express 3.0 x8 Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCI Express 3.0 x8</p>		
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz		
Hot-swap parts	Disk drives, power supplies, and cooling fans		
Safety, environment, and certifications	Environmental certifications	<ul style="list-style-type: none"> • Energy Star Server 1.1 qualified • RoHS-compliant 	
	EMC	FCC Class A, CSA CE	
	240VA	Supports	
	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)	
	Temperature - non operating (no package)	-10 °C to 60 °C	
	Temperature - non operating (with package)	-40 °C to 70 °C	
	Altitude - operating	Supported Altitude (unpressurized): 0-10000ft (0-3048m)	
	Humidity - operating	8%~80%, non-condensing	
	Humidity - non operating (no package)	8%~80%, non-condensing	
	Humidity - non operating (with package)	8%~90%, non-condensing	
	Acoustic noise (idle/working mode)	Category	Normal Configuration
		CPU	1
		HDD	2x 900GB 2.5" SAS 6Gb/s
		Memory	1x 8GB 1600MHz LVRDIMM
		PCIe adapters	I350 X520-DA2 Emulex LPe16002
		PSU	1x 800W
		RAID	RAID 700 adapter
		Sound Pressure (operating)	44.1 dB(A)
		Sound Pressure (idle)	44.4 dB(A)
			Best Configuration
			2
			16x 900GB 2.5" SAS 6Gb/s
			20x 8GB 1600MHz LVRDIMM
			I350 X520-DA2 Emulex LPe16002
			2x 800W
			RAID 700 adapter
			42.91 dB(A)
			43.8 dB(A)

ThinkServer RD640 Optional Configurations - Processor and Memory

Rack kit	Included in models																																																																																																																																																																																																																																																																																																																																																		
Processor	<p>Two LGA2011 sockets, supports up to two processors from Intel Xeon E5-2600 or Xeon E5-2600 v2 families, up to 8 cores (E5-2600 series)/12 cores (E5-2600 v2 series), two QPI links up to 8.0GT/s each, up to 20MB (E5-2600 series)/30MB (E5-2600 v2 series) cache, integrated 4-channel DDR3 memory controller up to 1600MHz (E5-2600 series)/1866MHz (E5-2600 v2 series).</p> <p>The following processor options are available:</p> <table><tr><th rowspan="2">Processor Number</th><th colspan="8">Processors Specifications*</th><th rowspan="2">Part Number</th></tr><tr><th># of Cores</th><th># of Threads</th><th>Clock Speed</th><th>Max Turbo Frequency</th><th>Cache</th><th>QPI Speed</th><th>Max TDP</th><th>Memory Speed</th></tr><tr><td colspan="10">Intel Xeon E5-2600 Series</td></tr><tr><td>Xeon E5-2690</td><td>8</td><td>16</td><td>2.9 GHz</td><td>3.8 GHz</td><td>20MB</td><td>8 GT/s</td><td>135 W</td><td>DDR3-1600</td><td>0A89429</td></tr><tr><td>Xeon E5-2680</td><td>8</td><td>16</td><td>2.7 GHz</td><td>3.5 GHz</td><td>20MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1600</td><td>0A89430</td></tr><tr><td>Xeon E5-2670</td><td>8</td><td>16</td><td>2.6 GHz</td><td>3.3 GHz</td><td>20MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1600</td><td>0A89431</td></tr><tr><td>Xeon E5-2667</td><td>6</td><td>12</td><td>2.9 GHz</td><td>3.5 GHz</td><td>15MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1600</td><td>0A89435</td></tr><tr><td>Xeon E5-2665</td><td>8</td><td>16</td><td>2.4 GHz</td><td>3.1 GHz</td><td>20MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1600</td><td>0A89432</td></tr><tr><td>Xeon E5-2660</td><td>8</td><td>16</td><td>2.2 GHz</td><td>3 GHz</td><td>20MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1600</td><td>0A89462</td></tr><tr><td>Xeon E5-2650L</td><td>8</td><td>16</td><td>1.8 GHz</td><td>2.3 GHz</td><td>20MB</td><td>8 GT/s</td><td>70 W</td><td>DDR3-1600</td><td>0A89434</td></tr><tr><td>Xeon E5-2650</td><td>8</td><td>16</td><td>2 GHz</td><td>2.8 GHz</td><td>20MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1600</td><td>0A89433</td></tr><tr><td>Xeon E5-2643</td><td>4</td><td>8</td><td>3.3 GHz</td><td>3.5 GHz</td><td>10MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1600</td><td>0A89440</td></tr><tr><td>Xeon E5-2640</td><td>6</td><td>12</td><td>2.5 GHz</td><td>3 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1333</td><td>0A89436</td></tr><tr><td>Xeon E5-2630L</td><td>6</td><td>12</td><td>2 GHz</td><td>2.5 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>60 W</td><td>DDR3-1333</td><td>0A89439</td></tr><tr><td>Xeon E5-2630</td><td>6</td><td>12</td><td>2.3 GHz</td><td>2.8 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1333</td><td>0A89437</td></tr><tr><td>Xeon E5-2620</td><td>6</td><td>12</td><td>2 GHz</td><td>2.5 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1333</td><td>0A89438</td></tr><tr><td>Xeon E5-2609</td><td>4</td><td>4</td><td>2.4 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1066</td><td>0A89441</td></tr><tr><td>Xeon E5-2603</td><td>4</td><td>4</td><td>1.8 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1066</td><td>0A89442</td></tr><tr><td colspan="10">Intel Xeon E5-2600 v2 Series</td></tr><tr><td>Xeon E5-2697 v2</td><td>12</td><td>24</td><td>2.7 GHz</td><td>3.5 GHz</td><td>30MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1866</td><td>0C19546</td></tr><tr><td>Xeon E5-2695 v2</td><td>12</td><td>24</td><td>2.4 GHz</td><td>3.2 GHz</td><td>30MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1866</td><td>0C19547</td></tr><tr><td>Xeon E5-2690 v2</td><td>10</td><td>20</td><td>3 GHz</td><td>3.6 GHz</td><td>25MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1866</td><td>0C19548</td></tr><tr><td>Xeon E5-2680 v2</td><td>10</td><td>20</td><td>2.8 GHz</td><td>3.6 GHz</td><td>25MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1866</td><td>0C19549</td></tr><tr><td>Xeon E5-2670 v2</td><td>10</td><td>20</td><td>2.5 GHz</td><td>3.3 GHz</td><td>25MB</td><td>8 GT/s</td><td>115 W</td><td>DDR3-1866</td><td>0C19550</td></tr><tr><td>Xeon E5-2667 v2</td><td>8</td><td>16</td><td>3.3 GHz</td><td>4 GHz</td><td>25MB</td><td>8 GT/s</td><td>130 W</td><td>DDR3-1866</td><td>0C19553</td></tr><tr><td>Xeon E5-2660 v2</td><td>10</td><td>20</td><td>2.2 GHz</td><td>3 GHz</td><td>25MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1866</td><td>0C19551</td></tr><tr><td>Xeon E5-2650 v2</td><td>8</td><td>16</td><td>2.6 GHz</td><td>3.4 GHz</td><td>20MB</td><td>8 GT/s</td><td>95 W</td><td>DDR3-1866</td><td>0C19552</td></tr><tr><td>Xeon E5-2650L v2</td><td>10</td><td>20</td><td>1.7 GHz</td><td>2.1 GHz</td><td>25MB</td><td>7.2 GT/s</td><td>70 W</td><td>DDR3-1600</td><td>0C19554</td></tr><tr><td>Xeon E5-2640 v2</td><td>8</td><td>16</td><td>2 GHz</td><td>2.5 GHz</td><td>20MB</td><td>7.2 GT/s</td><td>95 W</td><td>DDR3-1600</td><td>0C19555</td></tr><tr><td>Xeon E5-2630 v2</td><td>6</td><td>12</td><td>2.6 GHz</td><td>3.1 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>80 W</td><td>DDR3-1600</td><td>0C19558</td></tr><tr><td>Xeon E5-2630L v2</td><td>6</td><td>12</td><td>2.4 GHz</td><td>2.8 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>60 W</td><td>DDR3-1600</td><td>0C19556</td></tr><tr><td>Xeon E5-2620 v2</td><td>6</td><td>12</td><td>2.1 GHz</td><td>2.6 GHz</td><td>15MB</td><td>7.2 GT/s</td><td>80 W</td><td>DDR3-1600</td><td>0C19557</td></tr><tr><td>Xeon E5-2609 v2</td><td>4</td><td>4</td><td>2.5 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1333</td><td>0C19559</td></tr><tr><td>Xeon E5-2603 v2</td><td>4</td><td>4</td><td>1.8 GHz</td><td></td><td>10MB</td><td>6.4 GT/s</td><td>80 W</td><td>DDR3-1333</td><td>0C19560</td></tr></table> <p><i>Notes:</i> All processors specifications is provided by Intel and may be changed at any time without notice. The information herein is provided “as-is”. Intel may update this information in non-scheduled. For latest information, please see http://ark.intel.com/</p>	Processor Number	Processors Specifications*								Part Number	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	QPI Speed	Max TDP	Memory Speed	Intel Xeon E5-2600 Series										Xeon E5-2690	8	16	2.9 GHz	3.8 GHz	20MB	8 GT/s	135 W	DDR3-1600	0A89429	Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20MB	8 GT/s	130 W	DDR3-1600	0A89430	Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89431	Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15MB	8 GT/s	130 W	DDR3-1600	0A89435	Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89432	Xeon E5-2660	8	16	2.2 GHz	3 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89462	Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20MB	8 GT/s	70 W	DDR3-1600	0A89434	Xeon E5-2650	8	16	2 GHz	2.8 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89433	Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10MB	8 GT/s	130 W	DDR3-1600	0A89440	Xeon E5-2640	6	12	2.5 GHz	3 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89436	Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	60 W	DDR3-1333	0A89439	Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89437	Xeon E5-2620	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89438	Xeon E5-2609	4	4	2.4 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89441	Xeon E5-2603	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89442	Intel Xeon E5-2600 v2 Series										Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30MB	8 GT/s	130 W	DDR3-1866	0C19546	Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30MB	8 GT/s	115 W	DDR3-1866	0C19547	Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19548	Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19549	Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19550	Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19553	Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25MB	8 GT/s	95 W	DDR3-1866	0C19551	Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20MB	8 GT/s	95 W	DDR3-1866	0C19552	Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25MB	7.2 GT/s	70 W	DDR3-1600	0C19554	Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20MB	7.2 GT/s	95 W	DDR3-1600	0C19555	Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19558	Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15MB	7.2 GT/s	60 W	DDR3-1600	0C19556	Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19557	Xeon E5-2609 v2	4	4	2.5 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19559	Xeon E5-2603 v2	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19560
Processor Number	Processors Specifications*								Part Number																																																																																																																																																																																																																																																																																																																																										
	# of Cores	# of Threads	Clock Speed	Max Turbo Frequency	Cache	QPI Speed	Max TDP	Memory Speed																																																																																																																																																																																																																																																																																																																																											
Intel Xeon E5-2600 Series																																																																																																																																																																																																																																																																																																																																																			
Xeon E5-2690	8	16	2.9 GHz	3.8 GHz	20MB	8 GT/s	135 W	DDR3-1600	0A89429																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2680	8	16	2.7 GHz	3.5 GHz	20MB	8 GT/s	130 W	DDR3-1600	0A89430																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2670	8	16	2.6 GHz	3.3 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89431																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2667	6	12	2.9 GHz	3.5 GHz	15MB	8 GT/s	130 W	DDR3-1600	0A89435																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2665	8	16	2.4 GHz	3.1 GHz	20MB	8 GT/s	115 W	DDR3-1600	0A89432																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2660	8	16	2.2 GHz	3 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89462																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2650L	8	16	1.8 GHz	2.3 GHz	20MB	8 GT/s	70 W	DDR3-1600	0A89434																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2650	8	16	2 GHz	2.8 GHz	20MB	8 GT/s	95 W	DDR3-1600	0A89433																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2643	4	8	3.3 GHz	3.5 GHz	10MB	8 GT/s	130 W	DDR3-1600	0A89440																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2640	6	12	2.5 GHz	3 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89436																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2630L	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	60 W	DDR3-1333	0A89439																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2630	6	12	2.3 GHz	2.8 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89437																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2620	6	12	2 GHz	2.5 GHz	15MB	7.2 GT/s	95 W	DDR3-1333	0A89438																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2609	4	4	2.4 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89441																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2603	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1066	0A89442																																																																																																																																																																																																																																																																																																																																										
Intel Xeon E5-2600 v2 Series																																																																																																																																																																																																																																																																																																																																																			
Xeon E5-2697 v2	12	24	2.7 GHz	3.5 GHz	30MB	8 GT/s	130 W	DDR3-1866	0C19546																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2695 v2	12	24	2.4 GHz	3.2 GHz	30MB	8 GT/s	115 W	DDR3-1866	0C19547																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2690 v2	10	20	3 GHz	3.6 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19548																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2680 v2	10	20	2.8 GHz	3.6 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19549																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2670 v2	10	20	2.5 GHz	3.3 GHz	25MB	8 GT/s	115 W	DDR3-1866	0C19550																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2667 v2	8	16	3.3 GHz	4 GHz	25MB	8 GT/s	130 W	DDR3-1866	0C19553																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2660 v2	10	20	2.2 GHz	3 GHz	25MB	8 GT/s	95 W	DDR3-1866	0C19551																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2650 v2	8	16	2.6 GHz	3.4 GHz	20MB	8 GT/s	95 W	DDR3-1866	0C19552																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2650L v2	10	20	1.7 GHz	2.1 GHz	25MB	7.2 GT/s	70 W	DDR3-1600	0C19554																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2640 v2	8	16	2 GHz	2.5 GHz	20MB	7.2 GT/s	95 W	DDR3-1600	0C19555																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2630 v2	6	12	2.6 GHz	3.1 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19558																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2630L v2	6	12	2.4 GHz	2.8 GHz	15MB	7.2 GT/s	60 W	DDR3-1600	0C19556																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2620 v2	6	12	2.1 GHz	2.6 GHz	15MB	7.2 GT/s	80 W	DDR3-1600	0C19557																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2609 v2	4	4	2.5 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19559																																																																																																																																																																																																																																																																																																																																										
Xeon E5-2603 v2	4	4	1.8 GHz		10MB	6.4 GT/s	80 W	DDR3-1333	0C19560																																																																																																																																																																																																																																																																																																																																										
Memory type	1600MHz, RDIMM and LV RDIMM, DDR3, 4-channel per processor, 240-pin																																																																																																																																																																																																																																																																																																																																																		
Memory DIMM sockets	twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)																																																																																																																																																																																																																																																																																																																																																		
Memory capacity	Up to 320GB (16GBx20)																																																																																																																																																																																																																																																																																																																																																		
Memory protection	ECC, memory mirroring, memory sparing																																																																																																																																																																																																																																																																																																																																																		
Memory options	<table><tr><th>Memory options</th><th>Part Number</th></tr><tr><td>ThinkServer 4GB DDR3L-1600MHz (1RX8) RDIMM</td><td>0C19533</td></tr><tr><td>ThinkServer 8GB DDR3L-1600MHz (2RX8) RDIMM</td><td>0C19534</td></tr><tr><td>ThinkServer 16GB DDR3L-1600MHz (2RX4) RDIMM</td><td>0C19535</td></tr></table> <p><i>Notes:</i> ● Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs ● By default, the voltage of LV RDIMM is 1.5V and can be changed to 1.35V in BIOS setting ● When using Intel Xeon E5-2600 series processors, LV RIMM is needed to run at 1.5V to support all 20 memory DIMM sockets. If LV RIMM runs at 1.35V, only 16 memory DIMM sockets are functional (8 of 12 for CPU 1, 8 for CPU 2)</p>	Memory options	Part Number	ThinkServer 4GB DDR3L-1600MHz (1RX8) RDIMM	0C19533	ThinkServer 8GB DDR3L-1600MHz (2RX8) RDIMM	0C19534	ThinkServer 16GB DDR3L-1600MHz (2RX4) RDIMM	0C19535																																																																																																																																																																																																																																																																																																																																										
Memory options	Part Number																																																																																																																																																																																																																																																																																																																																																		
ThinkServer 4GB DDR3L-1600MHz (1RX8) RDIMM	0C19533																																																																																																																																																																																																																																																																																																																																																		
ThinkServer 8GB DDR3L-1600MHz (2RX8) RDIMM	0C19534																																																																																																																																																																																																																																																																																																																																																		
ThinkServer 16GB DDR3L-1600MHz (2RX4) RDIMM	0C19535																																																																																																																																																																																																																																																																																																																																																		

ThinkServer RD640 Optional Configurations - Storage and RAID

Disk drive bays	Supports one of the following configurations: <ul style="list-style-type: none"> • 8 x 3.5" SAS/SATA disk drive bays • 8 x 2.5" SAS/SATA disk drive bays • 16 x 2.5" SAS/SATA disk drive bays 						
Disk drive options	Disk drive options						Part Number
	Hot-swap Disk drive for 3.5" bay						
	3.5" SATA Hard Drive						
	ThinkServer 3.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89473
	ThinkServer 3.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89474
	ThinkServer 3.5" 2TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89475
	ThinkServer 3.5" 3TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0A89477
	ThinkServer 3.5" 4TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0C19520
	3.5" SAS Hard Drive						
	ThinkServer 3.5" 1TB 7.2K SAS 6Gbps Hot Swap Hard Drive						0C19530
	ThinkServer 3.5" 2TB 7.2K SAS 6Gbps Hot Swap Hard Drive						0C19531
	ThinkServer 3.5" 3TB 7.2K SAS 6Gbps Hot Swap Hard Drive						0C19532
	ThinkServer 3.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive						67Y2616
	ThinkServer 3.5" 600GB 15K SAS 6Gbps Hot Swap Hard Drive						67Y2618
	2.5" SSD for 3.5" disk bay						
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive to 3.5" Kit						0C19571
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive to 3.5" Kit						0C19572
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive to 3.5" Kit						0C19573
	Hot-swap Disk drive for 2.5" bay						
	2.5" SATA Hard Drive						
	ThinkServer 2.5" 500GB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0C19495
	ThinkServer 2.5" 1TB 7.2K Enterprise SATA 6Gbps Hot Swap Hard Drive						0C19496
	2.5" SAS Hard Drive						
	ThinkServer 2.5" 300GB 10K SAS 6Gbps Hot Swap Hard Drive						67Y2619
	ThinkServer 2.5" 600GB 10K SAS 6Gbps Hot Swap Hard Drive						67Y2621
	ThinkServer 2.5" 900GB 10K SAS 6Gbps Hot Swap Hard Drive						0A89409
	ThinkServer 2.5" 300GB 15K SAS 6Gbps Hot Swap Hard Drive						0C19494
	2.5" SSD						
	ThinkServer 2.5" 100GB MLC SATA Solid State Drive						0A89420
	ThinkServer 2.5" 200GB MLC SATA Solid State Drive						0A89418
	ThinkServer 2.5" 400GB MLC SATA Solid State Drive						0A89419
RAID support	RAID adapter	RAID support	Device Support	Cache	Host bus type	Data transfer rates (per port)	Optional upgrades
	ThinkServer RAID 500 (LSI® SAS 9240-8i)	0, 1, 10	SAS/SATA		PCI Express	6Gb/s	optional upgrade key, add RAID 5, 50 support
	ThinkServer RAID 700 (LSI SAS 9260-8i)	0, 1, 10, 5, 50, 6, 60	SAS/SATA	512MB	PCI Express	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)
	ThinkServer RAID 710 (LSI SAS 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	SAS/SATA	1GB	PCI Express	6Gb/s	• optional CacheVault flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath
RAID options	RAID controller and RAID upgrade options						Part Number
	ThinkServer RAID 500 Adapter II						0A89464
	ThinkServer RAID 500 Upgrade Key for Advanced RAID						0A89407
	ThinkServer RAID 700 Adapter II						0A89463
	ThinkServer RAID 700 Battery						67Y2647
	ThinkServer RAID 710 Adapter						0C19489
	ThinkServer RAID 710 Super Capacitor Module (CacheVault)						0C19490
	ThinkServer RAID 710 FastPath Software Key						0C19491
	ThinkServer RAID 710 CacheCade Pro 2.0 Software Key						0C19492

ThinkServer RD640 Optional Configurations - Network, System Management, Power Supply

Network options	Network and HBA options		Part Number
	ThinkServer 1 Gbps Ethernet I350-T2 Server Adapter by Intel		0C19506
	ThinkServer 1 Gbps Ethernet I350-T4 Server Adapter by Intel		0C19507
	Lenovo 10Gbps Ethernet X540-T2 Server Adapter by Intel		0C19497
	Lenovo 10Gbps Ethernet X520-DA2 Server Adapter by Intel		0C19486
	Lenovo 10Gbps Ethernet Fiber Module by Intel		0C19488
	Lenovo 10Gbps Ethernet X520-SR2 Server Adapter by Intel		0C19487
	ThinkServer QLE8242-CU-CK Dual Port CNA by QLogic		0C19483
	HBA		
	ThinkServer LPe1250 Single Port 8Gb Fibre Channel HBA by Emulex		0C19476
	ThinkServer LPe12002 Dual Port 8Gb Fibre Channel HBA by Emulex		0C19478
Security options	Trusted Platform Module options		Part Number
	ThinkServer Trusted Platform Module		0A89428
Systems management options for iKVM	System Management options		Part Number
	ThinkServer Management Module Premium		67Y2624
Power supply options	Power supply options		Part Number
	ThinkServer 800W Gold Hot Swap Redundant Power Supply for Rack		4X20E54690

ThinkServer RD640 Services Upgrade Options

Partial list of Lenovo Services for ThinkServer RD540 with 3-year onsite base warranty models

For more information see: http://www.lenovo.com/services_warranty/us/en/lenovo-warranty.html

Upgrade Service Description	Part Number
Warranty	
3YR Onsite 24x7x4 Hour Response	5WS0F15458
3YR Onsite 24x7x8 Hour Response	5WS0F15392
3YR Onsite 9x5x4 Hour Response	5WS0F15355
4YR Onsite 24x7x4 Hour Response	5WS0F15443
4YR Onsite 24x7x8 Hour Response	5WS0F15395
4YR Onsite 9x5x4 Hour Response	5WS0F15394
4YR Onsite NBD	5WS0F15415
5YR Onsite 24x7x4 Hour Response	5WS0F15377
5YR Onsite 24x7x8 Hour Response	5WS0F15440
5YR Onsite 9x5x4 Hour Response	5WS0F15430
5YR Onsite NBD	5WS0F15419
Keep Your Drive (KYD) Service	
3YR Keep Your Drive	5PS0F15436
3YR Onsite 24x7x4 Hour Response + KYD	5PS0F15376
3YR Onsite 24x7x8 Hour Response + KYD	5PS0F15349
3YR Onsite 9x5x4 Hour Response + KYD	5PS0F15448
4YR Onsite 24x7x4 Hour Response + KYD	5PS0F15389
4YR Onsite 24x7x8 Hour Response + KYD	5PS0F15359
4YR Onsite 9x5x4 Hour Response + KYD	5PS0F15456
4YR Onsite NBD + KYD	5PS0F15459
5YR Onsite 24x7x4 Hour Response + KYD	5PS0F15402
5YR Onsite 24x7x8 Hour Response + KYD	5PS0F15381
5YR Onsite 9x5x4 Hour Response + KYD	5PS0F15366
5YR Onsite NBD + KYD	5PS0F15391
Priority Technical Support	
3YR KYD + Priority Support	5PS0F15417
3YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15352
3YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15399
3YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15444
3YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15418
3YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15398
3YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15468
3YR Priority Support	5WS0E76471
4YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15462
4YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15410
4YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15433
4YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15425
4YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15400
4YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15351
4YR Onsite NBD + KYD + Priority Support	5PS0F15373
4YR Onsite NBD + Priority Support	5WS0F15401
4YR Priority Support	5WS0E77170
5YR Onsite 24x7x4 Hour Response + KYD + Priority Support	5PS0F15350
5YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15412
5YR Onsite 24x7x8 Hour Response + KYD + Priority Support	5PS0F15471
5YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15447
5YR Onsite 9x5x4 Hour Response + KYD + Priority Support	5PS0F15437
5YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15382
5YR Onsite NBD + KYD + Priority Support	5PS0F15388
5YR Onsite NBD + Priority Support	5WS0F15463
5YR Priority Support	5WS0E77173
Post Warranty	
1YR Onsite 24x7x4 Hour Response	5WS0F15435
1YR Onsite 24x7x4 Hour Response + Priority Support	5WS0F15370
1YR Onsite 24x7x8 Hour Response	5WS0F15427
1YR Onsite 24x7x8 Hour Response + Priority Support	5WS0F15361
1YR Onsite 9x5x4 Hour Response	5WS0F15416
1YR Onsite 9x5x4 Hour Response + Priority Support	5WS0F15348
1YR Onsite NBD	5WS0F15407
1YR Onsite NBD + Priority Support	5WS0F15465
TopSeller Priority (TopSeller models only)	
3YR Onsite 24x7x4 Hour Response	5WS0D73789
3YR Onsite 9x5x4 Hour Response	5WS0D73787
4YR Onsite 24x7x4 Hour Response	5WS0D73792
4YR Onsite 9x5x4 Hour Response	5WS0D73791
4YR Onsite NBD	5WS0F15470
3YR Onsite 24x7x4 Hour Response+Priority Support	5WS0F15414
3YR Onsite 9x5x4 Hour Response+Priority Support	5WS0F15423
3YR Priority Support	5WS0E76457
4YR Priority Support	5WS0E76482

Note:

24x7x4: 4 Hour Onsite Response Time in 24x7 Service Window

(requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.
- Best coverage for business critical work loads

9x5x4: 4 Hour Onsite Response Time in 9x5 Service Window

(requires Location Activation)

- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 4 hours.

24x7x8: 8 Hour Onsite Response Time in 24x7 Service Window

(requires Location Activation)

- 24 hours a day, 7 days a week, including nights and weekends
- Once the need for on-site presence is confirmed, an on-site technician is dispatched to arrive within 8 hours.

Priority Technical Support

Lenovo's Priority Technical Support provides direct access to an advanced level technician supporting all of hardware, operating system and software needs related to server issues, available 24 hours a day, 7 days a week.

Keep Your Drive (KYD) Service

Retain drive (hard drive or SSD) and confidential data if the drive must be replaced.

To confirm if 4hr services are available in a specified location, please use ThinkServer Service Availability Tool:

http://www.lenovo.com/services_warranty/us/en/locator.html

Once purchased, to activate the location of your 4hr/8hr ThinkServer Service, please use ThinkServer Service Activation page: <http://www.lenovo.com/activation>

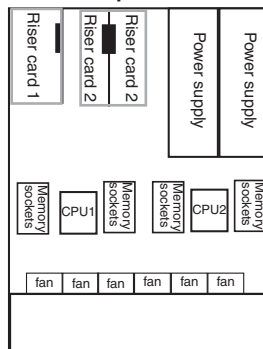

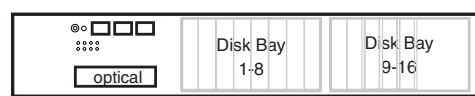
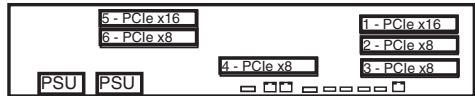
ThinkServer RD640 (70AY) - TopSeller

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AY0001US	2xE5-2609 v2 4C/2.5GHz/ 10MB/1333MHz	4GBx20	8x3.5"	RAID710 +CacheVault +CacheCade	2x400GB SSD(cache,RAID1) +6x1TB 3.5" SAS(RAID50)	DVD±RW	IDM Premium	iKVM	X520SR2 +350T2 +350T2	Cable	800Wx2	Standard	1
70AY0002UX	2xE5-2670 v2 10C/2.5GHz/ 25MB/1866MHz	16GBx4	8x3.5"	RAID500 +Upgrade	6x3TB 3.5" SATA(RAID50) +2x3TB 3.5" SAS(RAID1)	DVD±RW	IDM	IPMI	350T4	No	800Wx2	No	1
70AY0003UX	1xE5-2630L v2 6C/2.4GHz/ 15MB/1600MHz	8GBx2	8x3.5"	RAID700	2x500GB 3.5" SATA(RAID1)	No	IDM	IPMI	350T2	No	800Wx2	No	1
70AY0005UX	1xE5-2609 v2 4C/2.5GHz/ 10MB/1333MHz	8GBx1	8x3.5"	RAID500	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70AY0006UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x3.5"	RAID700	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70AY0007UX	1xE5-2650 v2 8C/2.6GHz/ 20MB/1866MHz	8GBx1	8x3.5"	RAID700	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70AY0008UX	1xE5-2690 v2 10C/3GHz/ 25MB/1866MHz	8GBx1	8x3.5"	RAID700	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3

1. Model in italics is Global model

- For detailed platform specifications, please see [ThinkServer RD640 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD640, please see [ThinkServer RD640 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					<div>2U Rack top</div> 	
Memory type	1600MHz, LV RDIMM, DDR3, 4-channel per processor, 240-pin						
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)						
Memory protection	ECC, memory mirroring, memory sparing						
Disk drive bays	Supports 8 x 3.5", or 8 x 2.5", or 16 x 2.5" disk drive bays						
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades	<div>Front - 3.5" bay</div> 	
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support		
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)		
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade® Pro 2.0• optional FastPath key		
	* All RAID adapters supports SAS and SATA drives						
Optical (optional)	One DVD±RW or DVD ROM, slim, SATA interface					<div>Front - 2.5" bay</div> <div>(Bay 9-16 comes with 16x2.5" models)</div> 	
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management						
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter						
Intelligent Diagnostics Module (IDM, opt)	Supports IDM or IDM Premium on selected models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part						
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)						
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate					<div>Rear</div> 	
Cable mgmt (opt)	Optional cable management arm on selected models						
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies						
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, please see ThinkServer RD640 Platform Specifications - Specifications of Standard Models sheet						

See footnotes for important warranty information
Model(s) announced October 29, 2013

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(70AY-1) October 2013

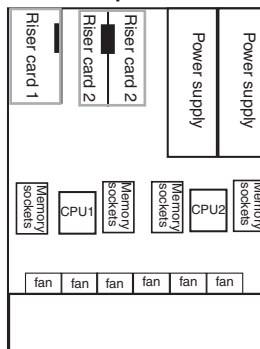
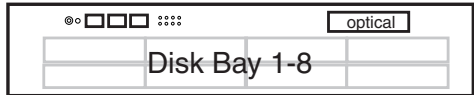
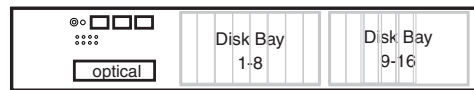
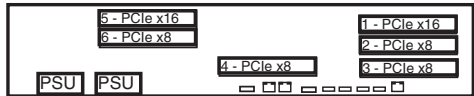
ThinkServer RD640 (70B1) - TopSeller

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70B10000US	2xE5-2630 v2 6C/2.6GHz/ 15MB/1600MHz	16GBx4	8x2.5"	RAID700 +Battery	3x300GB 2.5" SAS(RAID5)	DVD±RW	IDM	iKVM	350T2	Cable	800Wx2	Standard	1
70B10004UX	1xE5-2609 v2 4C/2.5GHz/ 10MB/1333MHz	8GBx1	8x2.5"	RAID500	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70B10005UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x2.5"	RAID700	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70B10006UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	8x2.5"	RAID710	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70B10007UX	1xE5-2640 v2 8C/2GHz/ 20MB/1600MHz	8GBx1	8x2.5"	RAID700	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70B10008UX	1xE5-2670 v2 10C/2.5GHz/ 25MB/1866MHz	8GBx1	8x2.5"	RAID710	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70B10009UX	1xE5-2690 v2 10C/3GHz/ 25MB/1866MHz	8GBx1	8x2.5"	RAID710	Open	DVD±RW	IDM Premium	iKVM	No	No	800Wx1	No	3

1. Model in *italics* is Global model

- For detailed platform specifications, please see [ThinkServer RD640 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD640, please see [ThinkServer RD640 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					<div>2U Rack top</div> 
Memory type	1600MHz, LV RDIMM, DDR3, 4-channel per processor, 240-pin					
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)					
Memory protection	ECC, memory mirroring, memory sparing					
Disk drive bays	Supports 8 x 3.5", or 8 x 2.5", or 16 x 2.5" disk drive bays					
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades	
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support	
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)	
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade® Pro 2.0• optional FastPath key	
* All RAID adapters supports SAS and SATA drives						<div>Front - 3.5" bay</div> 
Optical (optional)	One DVD±RW or DVD ROM, slim, SATA interface					<div>Front - 2.5" bay</div> <i>(Bay 9-16 comes with 16x2.5" models)</i> 
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management					<div>Rear</div> 
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter					
Intelligent Diagnostics Module (IDM, opt)	Supports IDM or IDM Premium on selected models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					<div>Front and Rear Ports</div> <p>Front: 2 USB 2.0, 1 VGA Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA</p>
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)					
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate					<div>Expansion Slots</div> <p>Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 3.0 x8 Slot 4: Low Profile, PCIe 3.0 x8 Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8</p>
Cable mgmt (opt)	Optional cable management arm on selected models					
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, please see ThinkServer RD640 Platform Specifications					<div>Mechanical</div> <ul style="list-style-type: none">• 2U rack with rail kit• 19"W x 28.9"D x 3.45"H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured

See footnotes for important warranty information
Model(s) announced October 29, 2013

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(70B1-1) October 2013

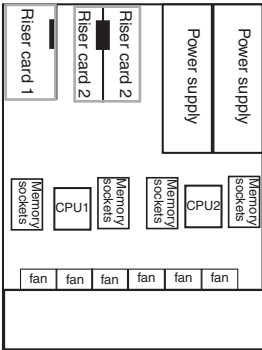

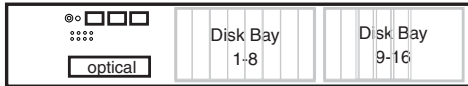
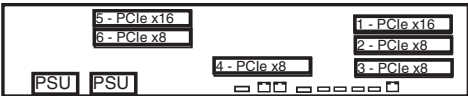
ThinkServer RD640 (70B0) - TopSeller

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70B00003US	2xE5-2690 v2 10C/3GHz/25MB/1866MHz	8GBx19+4GBx1	16x2.5"	RAID710 +CacheCade	2x100GB SSD(cache,RAID1) +14x1TB 2.5" SATA(RAID50)	DVD	IDM Premium	iKVM	X520SR2 +350T4+350T4	Cable	800Wx2	Standard	1
70B00004US	1xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	4GBx2	16x2.5"	RAID500	2x900GB 2.5" SAS(RAID1)	No	IDM	IPMI	350T4	No	800Wx2	Standard	1
70B0000FUX	1xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	8GBx1	16x2.5"	RAID700 +Battery	Open	DVD±RW	IDM Premium	iKVM	No	No	800Wx1	No	3
70B0000GUX	1xE5-2650 v2 8C/2.6GHz/20MB/1866MHz	8GBx1	16x2.5"	RAID710	Open	DVD±RW	IDM Premium	iKVM	No	No	800Wx1	No	3

1. Model in italics is Global model

- For detailed platform specifications, please see [ThinkServer RD640 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD640, please see [ThinkServer RD640 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					<div>2U Rack top</div> 	
Memory type	1600MHz, LV RDIMM, DDR3, 4-channel per processor, 240-pin						
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)						
Memory protection	ECC, memory mirroring, memory sparing						
Disk drive bays	Supports 8 x 3.5", or 8 x 2.5", or 16 x 2.5" disk drive bays					<div>Front - 3.5" bay</div>  <div>Front - 2.5" bay (Bay 9-16 comes with 16x2.5" models)</div>  <div>Rear</div> 	
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades		
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support		
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)		
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade® Pro 2.0• optional FastPath key		
* All RAID adapters supports SAS and SATA drives						<div>Front and Rear Ports</div> <div>Front: 2 USB 2.0, 1 VGA</div> <div>Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA</div> <div>Expansion Slots</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 2: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 3: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 4: Low Profile, PCIe 3.0 x8</div> <div>Slot 5-6 are available on dual processors models:</div> <div>Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 6: half-length, full-height, PCIe 3.0 x8</div> <div>Mechanical</div> <ul style="list-style-type: none">• 2U rack with rail kit• 19"W x 28.9"D x 3.45"H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured	
Optical (optional)	One DVD±RW or DVD ROM, slim, SATA interface						
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management						
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter						
Intelligent Diagnostics Module (IDM, opt)	Supports IDM or IDM Premium on selected models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					<div>Front and Rear Ports</div> <div>Front: 2 USB 2.0, 1 VGA</div> <div>Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA</div> <div>Expansion Slots</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 2: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 3: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 4: Low Profile, PCIe 3.0 x8</div> <div>Slot 5-6 are available on dual processors models:</div> <div>Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 6: half-length, full-height, PCIe 3.0 x8</div> <div>Mechanical</div> <ul style="list-style-type: none">• 2U rack with rail kit• 19"W x 28.9"D x 3.45"H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured	
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)						
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate						
Cable mgmt (opt)	Optional cable management arm on selected models						
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					<div>Front and Rear Ports</div> <div>Front: 2 USB 2.0, 1 VGA</div> <div>Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA</div> <div>Expansion Slots</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 2: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 3: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 4: Low Profile, PCIe 3.0 x8</div> <div>Slot 5-6 are available on dual processors models:</div> <div>Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 6: half-length, full-height, PCIe 3.0 x8</div> <div>Mechanical</div> <ul style="list-style-type: none">• 2U rack with rail kit• 19"W x 28.9"D x 3.45"H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured	
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, please see ThinkServer RD640 Platform Specifications						

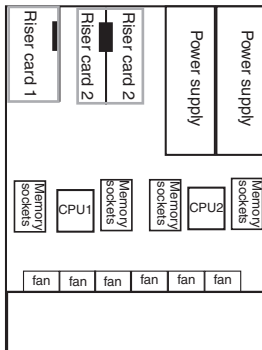

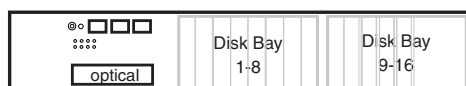
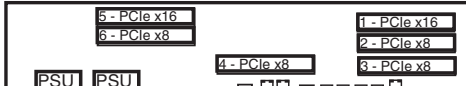
ThinkServer RD640 (70B0) - TopSeller (November 2013)

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70B0000LUX	1xE5-2650v2 8C/2.6GHz /20MB/1866MHz	8GBx1	16x2.5"	RAID710	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3

1. Model in italics is Global model

- For detailed platform specifications, please see [ThinkServer RD640 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD640, please see [ThinkServer RD640 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					2U Rack top 							
Memory type	1600MHz, LV RDIMM, DDR3, 4-channel per processor, 240-pin												
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)												
Memory protection	ECC, memory mirroring, memory sparing												
Disk drive bays	Supports 8 x 3.5", or 8 x 2.5", or 16 x 2.5" disk drive bays												
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades								
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support								
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)								
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none"> • optional CacheVault (CV) flash cache with super capacitor • optional CacheCade® Pro 2.0 • optional FastPath key 								
* All RAID adapters supports SAS and SATA drives						Front - 3.5" bay 							
Optical (optional)	One DVD±RW or DVD ROM, slim, SATA interface												
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management					Front - 2.5" bay (Bay 9-16 comes with 16x2.5" models) 							
Discrete network (optional)	<ul style="list-style-type: none"> • Intel Ethernet Server Adapter I350-T2 • Intel Ethernet Server Adapter I350-T4 • Intel 10Gbps Ethernet X520-SR2 Server adapter • Intel 10Gbps Ethernet X520-DA2 Server adapter • Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter • Intel 10Gbps Ethernet X540-T2 Server adapter 					Rear 							
Intelligent Diagnostics Module (IDM, opt)	Supports IDM or IDM Premium on selected models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part												
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)												
Systems management (Optional iKVM)	<ul style="list-style-type: none"> • Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions • Control Panel LEDs shows the status of power, ID, network, system • Lenovo SmartGrid Manager • ThinkServer EasyStartup/EasyManage/EasyUpdate 												
Cable mgmt (opt)	Optional cable management arm on selected models												
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies												
Environmental certifications	<ul style="list-style-type: none"> • Energy Star Server 2.0 qualified • RoHS-compliant More environmental information and requirements, please see ThinkServer RD640 Platform Specifications					Front and Rear Ports Front: 2 USB 2.0, 1 VGA Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA Expansion Slots Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 2: half-length, full-height, PCIe 3.0 x8 Slot 3: half-length, full-height, PCIe 3.0 x8 Slot 4: Low Profile, PCIe 3.0 x8 Slot 5-6 are available on dual processors models: Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec) Slot 6: half-length, full-height, PCIe 3.0 x8 Mechanical <ul style="list-style-type: none"> • 2U rack with rail kit • 19"W x 28.9"D x 3.45"H (with rack handles) • 482.4mm W x 734mm D x 87.6mm H (with rack handles) • 26.5 kg (58.42 lb) when fully configured 							

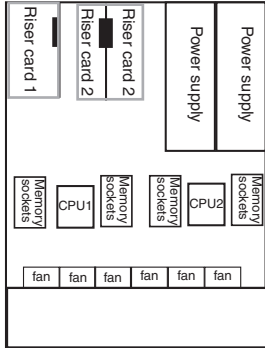
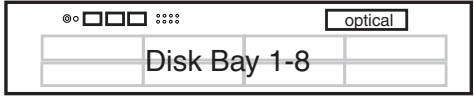
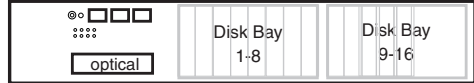

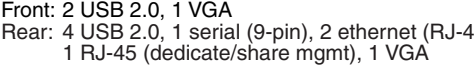
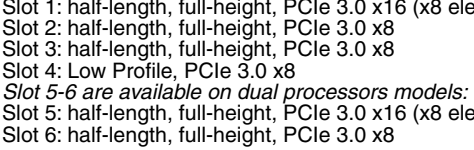
ThinkServer RD640 (70AV)

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AV0000UX	1xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	8GBx1	8x3.5"	RAID500	Open	DVD±RW	IDM Premium	IPMI	No	No	800Wx1	No	3
70AV0001UX	1xE5-2620 v2 6C/2.1GHz/15MB/1600MHz	8GBx1	8x3.5"	RAID700	Open	DVD±RW	IDM Premium	iKVM	No	No	800Wx1	No	3

1. Model in italics is Global model

- For detailed platform specifications, please see [ThinkServer RD640 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD640, please see [ThinkServer RD640 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					
Memory type	1600MHz, LV RDIMM, DDR3, 4-channel per processor, 240-pin					
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)					
Memory protection	ECC, memory mirroring, memory sparing					
Disk drive bays	Supports 8 x 3.5", or 8 x 2.5", or 16 x 2.5" disk drive bays					
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades	
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support	
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)	
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade® Pro 2.0• optional FastPath key	
* All RAID adapters supports SAS and SATA drives						
Optical (optional)	One DVD±RW or DVD ROM, slim, SATA interface					
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management					
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter					
Intelligent Diagnostics Module (IDM, opt)	Supports IDM or IDM Premium on selected models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)					
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate					
Cable mgmt (opt)	Optional cable management arm on selected models					
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, please see ThinkServer RD640 Platform Specifications					

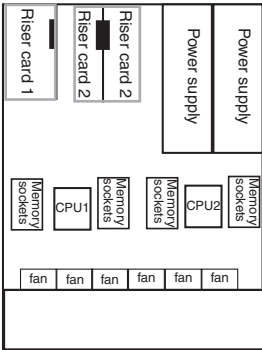

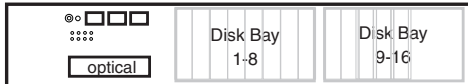
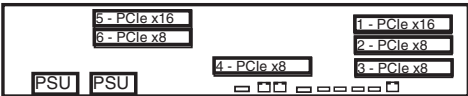
ThinkServer RD640 (70AX)

Product Specifications Reference (PSREF)

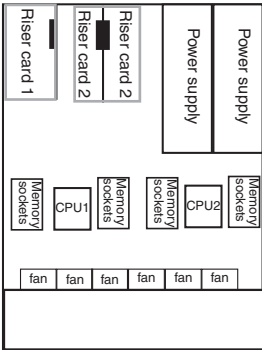
Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AX0000UX	1xE5-2620 6C/2GHz/15MB/1333MHz	8GBx1	8x2.5"	RAID700	Open	DVD±RW	IDM Premium	iKVM	No	No	800Wx1	No	3

1. Model in italics is Global model

- For detailed platform specifications, please see [ThinkServer RD640 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD640, please see [ThinkServer RD640 Optional Configurations sheets](#)


Chipset	Intel C602J Chipset, two LGA2011 sockets for processors						
Memory type	1600MHz, LV RDIMM, DDR3, 4-channel per processor, 240-pin						
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)						
Memory protection	ECC, memory mirroring, memory sparing						
Disk drive bays	Supports 8 x 3.5", or 8 x 2.5", or 16 x 2.5" disk drive bays						
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades		
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support		
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)		
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade® Pro 2.0• optional FastPath key		
* All RAID adapters supports SAS and SATA drives							
Optical (optional)	One DVD±RW or DVD ROM, slim, SATA interface						
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management						
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter						
Intelligent Diagnostics Module (IDM, opt)	Supports IDM or IDM Premium on selected models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part						
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)						
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate						
Cable mgmt (opt)	Optional cable management arm on selected models						
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies						
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant More environmental information and requirements, please see ThinkServer RD640 Platform Specifications						

2U Rack top



Riser card 1
Riser card 2
Power supply
Power supply
Memory sockets
CPU1
Memory sockets
CPU2
Memory sockets
fan fan fan fan fan fan

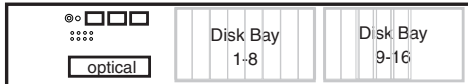
Front - 3.5" bay



optical
Disk Bay 1-8

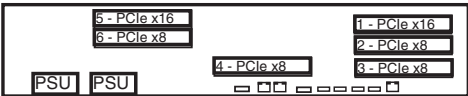
Front - 2.5" bay

(Bay 9-16 comes with 16x2.5" models)



optical
Disk Bay 1-8
Disk Bay 9-16

Rear



5 - PCIe x16
5 - PCIe x8
1 - PCIe x16
2 - PCIe x8
4 - PCIe x8
3 - PCIe x8
PSU PSU

Front and Rear Ports

Front: 2 USB 2.0, 1 VGA
Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA

Expansion Slots

Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec)
Slot 2: half-length, full-height, PCIe 3.0 x8
Slot 3: half-length, full-height, PCIe 3.0 x8
Slot 4: Low Profile, PCIe 3.0 x8
Slot 5-6 are available on dual processors models:
Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec)
Slot 6: half-length, full-height, PCIe 3.0 x8

Mechanical

- 2U rack with rail kit
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

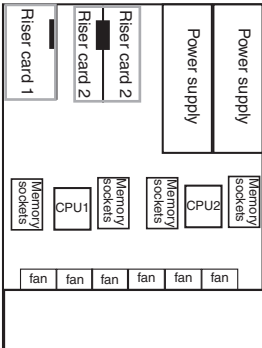

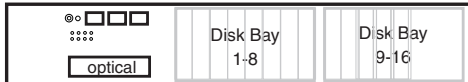
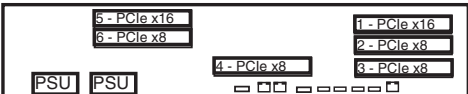
ThinkServer RD640 (70AW)

Product Specifications Reference (PSREF)

Type-model ¹	Intel Xeon Processor(s)	1600MHz LV RDIMM memory	Disk Bays	RAID controller	Storage	Slim optical	Intelligent Diagnostics	Remote mgmt	Discrete ethernet	Cable mgmt	PSU	Windows Server 2012 Preloaded	Base on-site warranty (-year)
70AW0005UX	1xE5-2620 v2 6C/2.1GHz/ 15MB/1600MHz	8GBx1	16x2.5"	RAID700	Open	DVD±RW	IDM Premium	iKVM	No	No	800Wx1	No	3

1. Model in italics is Global model

- For detailed platform specifications, please see [ThinkServer RD640 Platform Specifications sheets](#)
- For optional configurations of ThinkServer RD640, please see [ThinkServer RD640 Optional Configurations sheets](#)

Chipset	Intel C602J Chipset, two LGA2011 sockets for processors					<div>2U Rack top</div> 	
Memory type	1600MHz, LV RDIMM, DDR3, 4-channel per processor, 240-pin						
Memory DIMMs	Twenty DIMM sockets (12 sockets for CPU 1, 8 sockets for CPU 2)						
Memory protection	ECC, memory mirroring, memory sparing						
Disk drive bays	Supports 8 x 3.5", or 8 x 2.5", or 16 x 2.5" disk drive bays					<div>Front - 3.5" bay</div> 	
RAID support	RAID adapter*	RAID support	Cache	Transfer rates	Optional upgrades		
	RAID 500 (LSI® 9240-8i)	0, 1, 10		6Gb/s	optional upgrade key, add RAID 5, 50 support		
	RAID 700 (LSI 9260-8i)	0, 1, 10, 5, 50, 6, 60	512MB	6Gb/s	optional intelligent Battery Backup Unit (iBBU08)		
	RAID 710 (LSI 9270CV-8i)	0, 1, 10, 5, 50, 6, 60	1GB	6Gb/s	<ul style="list-style-type: none">• optional CacheVault (CV) flash cache with super capacitor• optional CacheCade® Pro 2.0• optional FastPath key		
* All RAID adapters supports SAS and SATA drives						<div>Front - 2.5" bay</div> <div>(Bay 9-16 comes with 16x2.5" models)</div> 	
Optical (optional)	One DVD±RW or DVD ROM, slim, SATA interface						
Onboard network	Three onboard Gigabit Ethernet ports (RJ-45): Two Gigabit Ethernet ports by Intel i350; one Gigabit Ethernet port by Intel 82574L, dedicate/share management						
Discrete network (optional)	<ul style="list-style-type: none">• Intel Ethernet Server Adapter I350-T2• Intel Ethernet Server Adapter I350-T4• Intel 10Gbps Ethernet X520-SR2 Server adapter• Intel 10Gbps Ethernet X520-DA2 Server adapter• Intel 10Gbps Ethernet Fiber Module for X520-DA2 adapter• Intel 10Gbps Ethernet X540-T2 Server adapter						
Intelligent Diagnostics Module (IDM, opt)	Supports IDM or IDM Premium on selected models, IDM LED lights indicate failing component category, IDM Premium LED lights indicate individual failing part					<div>Rear</div> 	
Security features	Power-on password/administrator password, Trusted Platform Module (TCG 1.2-compliant)						
Systems management (Optional iKVM)	<ul style="list-style-type: none">• Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); optional ThinkServer Management Module Premium for iKVM functions• Control Panel LEDs shows the status of power, ID, network, system• Lenovo SmartGrid Manager• ThinkServer EasyStartup/EasyManage/EasyUpdate						
Cable mgmt (opt)	Optional cable management arm on selected models						
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies					<div>Front and Rear Ports</div> <div>Front: 2 USB 2.0, 1 VGA</div> <div>Rear: 4 USB 2.0, 1 serial (9-pin), 2 ethernet (RJ-45), 1 RJ-45 (dedicate/share mgmt), 1 VGA</div>	
Environmental certifications	<ul style="list-style-type: none">• Energy Star Server 2.0 qualified• RoHS-compliant <div>More environmental information and requirements, please see ThinkServer RD640 Platform Specifications</div>						
						<div>Expansion Slots</div> <div>Slot 1: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 2: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 3: half-length, full-height, PCIe 3.0 x8</div> <div>Slot 4: Low Profile, PCIe 3.0 x8</div> <div>Slot 5-6 are available on dual processors models:</div> <div>Slot 5: half-length, full-height, PCIe 3.0 x16 (x8 elec)</div> <div>Slot 6: half-length, full-height, PCIe 3.0 x8</div>	
						<div>Mechanical</div> <ul style="list-style-type: none">• 2U rack with rail kit• 19"W x 28.9"D x 3.45"H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured	

ThinkServer RD530 Photography - 3.5" disk bays *

** Some models in pictures below contain optional add-in ethernet adapter, please see O-RDS for more RD530 accessories*



- Up to two Intel® Xeon® E5-2600 series processors, up to 8 cores/16 threads per processor
- Up to 320GB ECC RDIMM memory (20x16GB) or 256GB ECC LV RDIMM memory (16x16GB)
- Up to four 3.5" hot-swap disk bays
- Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter
- Up to two power supplies with redundant, hot-swap, 80 PLUS® Gold qualified
- Up to eight fans (7+1 redundant), non hot-swap

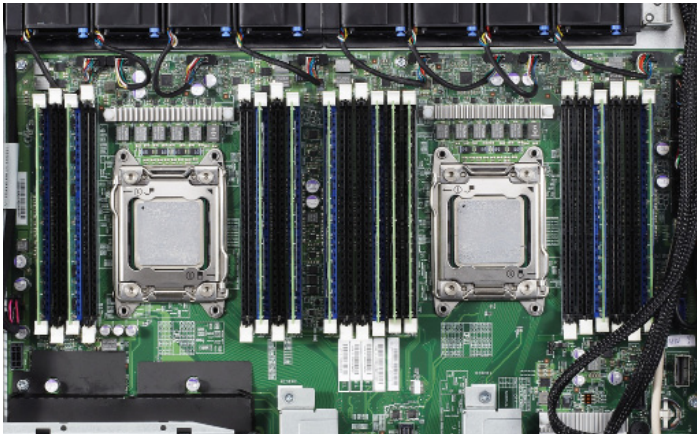
ThinkServer RD530 Photography - 2.5" disk bays *

* Some models in pictures below contain optional add-in ethernet adapter, please see O-RDS for more RD530 accessories

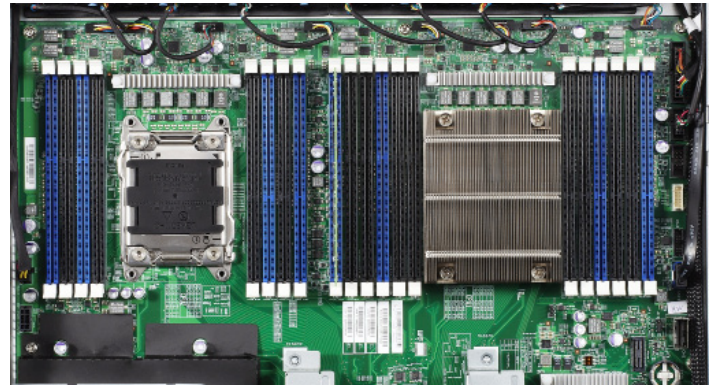


- Up to two Intel® Xeon® E5-2600 series processors, up to 8 cores/16 threads per processor
- Up to 320GB ECC RDIMM memory (20x16GB) or 256GB ECC LV RDIMM memory (16x16GB)
- Up to eight 2.5" hot-swap disk bays
- Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter
- Up to two power supplies with redundant, hot-swap, 80 PLUS® Gold qualified
- Up to eight fans (7+1 redundant), non hot-swap

ThinkServer RD530 Photography - Details



Dual processors



Single processor



ThinkServer 800W Hot-Swap power supply
for ThinkServer RD530/RD630
(80 PLUS® Gold qualified,
redundant with two power supplies)



2.5" Hot-swap disk bay



ThinkServer RD530 rear I/O ports

ThinkServer RD530 with 3.5" Disk Bay (2570) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2570-A2U	1xE5-2620	1333MHz RDIMM	1x8GB	No	700	None	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
2570-A3U	1xE5-2640	1333MHz RDIMM	1x8GB	No	700	None	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
2570-A4U	2xE5-2640	1333MHz RDIMM	2x8GB	No	700+Battery	None	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
2570-A5U	1xE5-2650	1333MHz RDIMM	1x8GB	No	700	None	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
2570-A6U	1xE5-2670	1333MHz RDIMM	2x8GB	No	700	None	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
2570-A7U	1xE5-2640	1333MHz RDIMM	1x16GB	No	700	None	4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	2

Limited warranty **3-year** parts and labor; more Lenovo Services see S-RDS sheet

Processor
Up to two processors, one or two processors standard,
Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz)

Implementation
Two LGA2011 sockets

Memory
RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin;
RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB)
LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)

Additional memory disclaimers

- Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs
- Over twelve RDIMMs requires dual processors
- Over eight LV RDIMMs requires dual processors
- Mixing of RDIMM and LV RDIMM is not supported

Graphics
Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear;
Maximum resolution: 1920x1200@60Hz

Disk bays
Four 3.5" hot-swap SATA/SAS disk bays

Disk controller
RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support
Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5 support
RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support
Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700

RAID Support
Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter

Disk(s)
3.5" SATA: SATA 6.0Gb/s, 7200 rpm
3.5" SAS: SAS 6.0Gb/s, 15000 rpm

Tape drive
None
Optical
DVD±RW or DVD ROM, slim
Diskette
None (use USB port)

Chipset
Intel C602J Chipset

Ethernet
Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2

Riser card
Two USB 2.0

Front ports
Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector

Rear ports
Supports IDM on selected models

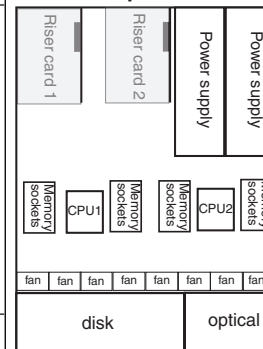
Intelligent Diagnostics Module (IDM)
Basic: IDM LED lights indicate failing component category
Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC);
iKVM: add-on ThinkServer Management Module Premium for iKVM functions

Security chip
No onboard TPM chip;
TPM: additional add-on card for TPM function, TCG 1.2-compliant

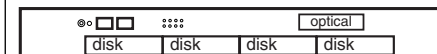
Prerequisites
Keyboard/mouse
None (use USB port)
Power supply
One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies

Rack kit
Includes rack kit
Cable management
Cable: contains cable management arm
Cooling
Up to eight fans (7+1 redundant), non-hot swap

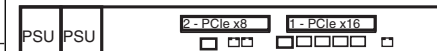
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1 5.25", 0.5" high, external, for optical
Bay 2-5 3.5", 1" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD530 with 3.5" Disk Bay (2569) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2569-A1U	2xE5-2640	1333MHz RDIMM	2x8GB	5	700+Battery	3x500GB 3.5" SATA	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2

Limited warranty	1-year parts and labor; more Lenovo Services see S-RDS sheet														
Processor	Up to two processors, one or two processors standard, Intel® Xeon® E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz)														
Implementation	Two LGA2011 sockets														
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Four 3.5" hot-swap SATA/SAS disk bays														
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter														
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2														
Riser card	Two USB 2.0														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Rear ports	Supports IDM on selected models Basic: IDM LED lights indicate failing component category Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Intelligent Diagnostics Module (IDM)															
Systems mgmt															
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to eight fans (7+1 redundant), non-hot swap														

1U Rack top

Front

Rear

Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1	5.25", 0.5" high, external,	for optical
Bay 2-5	3.5", 1" high, external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant

RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD530 with 3.5" Disk Bay (2573)

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2573-A1U	1xE5-2620	1333MHz	RDIMM 1x8GB	No	700		4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
2573-A2U	1xE5-2670	1333MHz	RDIMM 2x8GB	No	700+Battery		4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
2573-A3U	1xE5-2640	1333MHz	RDIMM 1x16GB	No	700		4xHS	SATA/SAS	DVD±RW	No	TPM	IPMI	No	No	1
2573-A4U	1xE5-2650	1333MHz	RDIMM 2x8GB	No	700+Battery		4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
2573-A5U	1xE5-2620	1333MHz	RDIMM 2x8GB	No	700+Battery	4x500GB 3.5" SATA	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2
2573-A6U	1xE5-2650	1333MHz	RDIMM 4x8GB	No	700+Battery	4x300GB 3.5" SAS	4xHS	SATA/SAS	DVD±RW	No	TPM	iKVM	No	No	2

Limited warranty **3-year** parts and labor; more Lenovo Services see S-RDS sheet

Processor
Up to two processors, one or two processors standard.
Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz)

Implementation
Two LGA2011 sockets

Memory
RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin;
RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB)
LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)

Additional memory disclaimers

- Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs
- Over twelve RDIMMs requires dual processors
- Over eight LV RDIMMs requires dual processors
- Mixing of RDIMM and LV RDIMM is not supported

Graphics
Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on rear;
Maximum resolution: 1920x1200@60Hz

Disk bays
Four 3.5" hot-swap SATA/SAS disk bays

Disk controller
RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support
Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5 support
RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10 support
Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700

RAID Support
Up to RAID 0, 1, 5, 6, 10 via ThinkServer RAID 700 adapter

Disk(s)
3.5" SATA: SATA 6.0Gb/s, 7200 rpm
3.5" SAS: SAS 6.0Gb/s, 15000 rpm

Tape drive
None
Optical
DVD±RW or DVD ROM, slim
Diskette
None (use USB port)

Chipset
Intel C602J Chipset

Ethernet
Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2

Riser card
Two USB 2.0

Front ports
Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector

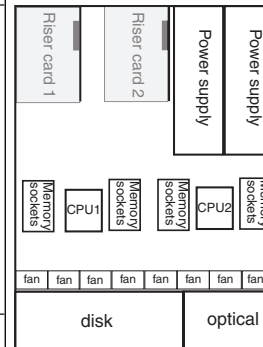
Rear ports
Supports IDM on selected models
Basic: IDM LED lights indicate failing component category
Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC);
iKVM: add-on ThinkServer Management Module Premium for iKVM functions

Security chip
No onboard TPM chip;
TPM: additional add-on card for TPM function, TCG 1.2-compliant

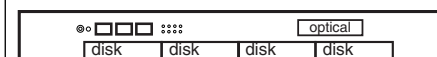
Prerequisites
SATA/SAS disk, OS
Keyboard/mouse
None (use USB port)
Power supply
One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies

Rack kit
Includes rack kit
Cable management
Optional cable management arm on selected models
Cooling
Up to eight fans (7+1 redundant), non-hot swap

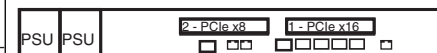
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.9"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1 5.25", 0.5" high, external, for optical
Bay 2-5 3.5", 1" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD530 with 2.5" Disk Bay (2575) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2575-A1U	1xE5-2620	1333MHz RDIMM	1x4GB	No	500	None	8xHS	SATA/SAS	No	No	TPM	IPMI	No	No	1
2575-A2U	1xE5-2640	1333MHz RDIMM	2x4GB	No	700+Battery	None	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2575-A4U	1xE5-2620	1333MHz RDIMM	1x8GB	No	700	None	8xHS	SATA/SAS	No	No	TPM	IPMI	No	No	1
2575-A6U	1xE5-2640	1333MHz RDIMM	2x8GB	No	700	None	8xHS	SATA/SAS	No	No	TPM	IPMI	No	No	1
2575-A7U	1xE5-2650	1333MHz RDIMM	3x8GB	No	700+Battery	None	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2575-A8U	1xE5-2670	1333MHz RDIMM	3x8GB	No	700+Battery	None	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2575-A9U	2xE5-2650	1333MHz RDIMM	4x8GB	No	700+Battery	None	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2

Limited warranty **3-year** parts and labor; more Lenovo Services see S-RDS sheet

Processor
Up to two processors, one or two processors standard,
Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz)

Implementation
Two LGA2011 sockets

Memory
RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin;
RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB)
LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)

Additional memory disclaimers

- Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs
- Over twelve RDIMMs requires dual processors
- Over eight LV RDIMMs requires dual processors
- Mixing of RDIMM and LV RDIMM is not supported

Graphics
Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear;
Maximum resolution: 1920x1200@60Hz

Disk bays
Eight 2.5" hot-swap SATA/SAS disk bays
Disk controller
RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support
Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support
RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support
Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support
Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter

Disk(s)
2.5" SAS: SAS 6.0Gb/s, 10000 rpm
SSD: Solid State Drive, 2.5"

Tape drive
None
Optical
None (use USB port)
Diskette
None (use USB port)

Chipset
Intel C602J Chipset

Ethernet
Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2

Riser card
Two USB 2.0, one analog VGA DB-15 connector

Front ports
Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share sys mgmt), one analog VGA DB-15 connector

Rear ports
Supports IDM on selected models
Intelligent Diagnostics Module (IDM)
Basic: IDM LED lights indicate failing component category

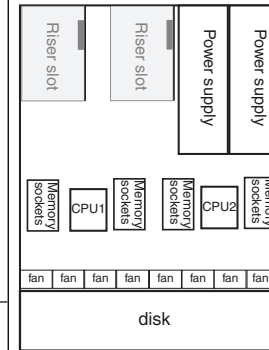
Systems mgmt
Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC);
iKVM: add-on ThinkServer Management Module Premium for iKVM functions

Security chip
No onboard TPM chip;
TPM: additional add-on card for TPM function, TCG 1.2-compliant

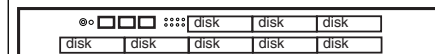
Prerequisites
SATA/SAS disk, OS
Keyboard/mouse
None (use USB port)
Power supply
One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies

Rack kit
Includes rack kit
Cable management
Optional cable management arm on selected models
Cooling
Up to eight fans (7+1 redundant), non-hot swap

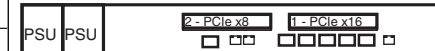
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.4"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1-8 2.5", 0.6" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

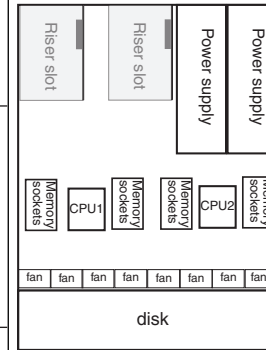
ThinkServer RD530 with 2.5" Disk Bay (2574) - TopSeller

Product Specifications Reference (PSREF)

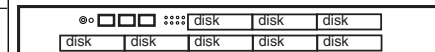
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2574-A1U	2xE5-2640	1333MHz RDIMM	2x8GB		700+Battery	2x300GB 2.5" SAS	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2574-A2U	2xE5-2640	1333MHz RDIMM	2x8GB	5	700+Battery	3x300GB 2.5" SAS	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2

Limited warranty	1-year parts and labor; more Lenovo Services see S-RDS sheet														
Processor	Up to two processors, one or two processors standard, Intel® Xeon® E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz)														
Implementation	Two LGA2011 sockets														
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Eight 2.5" hot-swap SATA/SAS disk bays														
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter														
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"														
Tape drive	None														
Optical	None (use USB port)														
Diskette	None (use USB port)														
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2														
Riser card	Two USB 2.0, one analog VGA DB-15 connector														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share sys mgmt), one analog VGA DB-15 connector														
Rear ports	Supports IDM on selected models														
Intelligent Diagnostics Module (IDM)	Basic: IDM LED lights indicate failing component category														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to eight fans (7+1 redundant), non-hot swap														

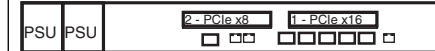
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.4"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1-8 2.5", 0.6" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD530 with 2.5" Disk Bay (2576)

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2576-A1U	1xE5-2620	1333MHz RDIMM	1x8GB	No	700		8xHS	SATA/SAS	No	No	TPM	IPMI	No	No	1
2576-A2U	1xE5-2640	1333MHz RDIMM	1x8GB	No	700+Battery		8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2576-A3U	1xE5-2650	1333MHz RDIMM	2x8GB	No	700+Battery		8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2576-A4U	1xE5-2650	1333MHz RDIMM	6x8GB	No	700+Battery	4x300GB 2.5" SAS	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2576-A5U	1xE5-2620	1333MHz RDIMM	3x8GB	No	700+Battery	4x300GB 2.5" SAS	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2
2576-A6U	2xE5-2670	1333MHz RDIMM	6x16GB	No	700+Battery	4x300GB 2.5" SAS	8xHS	SATA/SAS	No	No	TPM	iKVM	No	No	2

Limited warranty **3-year** parts and labor; more Lenovo Services see S-RDS sheet

Processor
Up to two processors, one or two processors standard,
Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz)

Implementation
Two LGA2011 sockets

Memory
RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin;
RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB)
LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)

Additional memory disclaimers

- Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs
- Over twelve RDIMMs requires dual processors
- Over eight LV RDIMMs requires dual processors
- Mixing of RDIMM and LV RDIMM is not supported

Graphics
Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear;
Maximum resolution: 1920x1200@60Hz

Disk bays
Eight 2.5" hot-swap SATA/SAS disk bays
Disk controller
RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support
Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support
RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support
Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support
Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter

Disk(s)
2.5" SAS: SAS 6.0Gb/s, 10000 rpm
SSD: Solid State Drive, 2.5"

Tape drive
None
Optical
None (use USB port)
Diskette
None (use USB port)

Chipset
Intel C602J Chipset

Ethernet
Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1, riser card 2 for slot 2

Riser card
Two USB 2.0, one analog VGA DB-15 connector

Front ports
Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share sys mgmt), one analog VGA DB-15 connector

Rear ports
Supports IDM on selected models

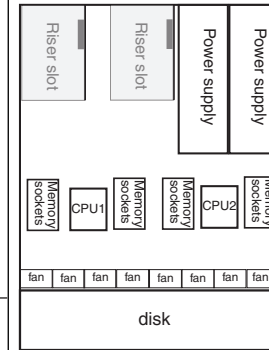
Intelligent Diagnostics Module (IDM)
Basic: IDM LED lights indicate failing component category
Systems mgmt
Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC);
iKVM: add-on ThinkServer Management Module Premium for iKVM functions

Security chip
No onboard TPM chip;
TPM: additional add-on card for TPM function, TCG 1.2-compliant

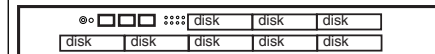
Prerequisites
Keyboard/mouse
None (use USB port)
Power supply
One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies

Rack kit
Includes rack kit
Cable management
Optional cable management arm on selected models
Cooling
Up to eight fans (7+1 redundant), non-hot swap

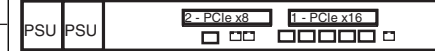
1U Rack top



Front



Rear



Mechanical

- 1U rack
- 19"W x 28.4"D x 1.72"H (with rack handles)
- 482.4mm W x 734mm D x 43.6mm H (with rack handles)
- 17kg (37.5 lb) when fully configured

Disk Bays

Bay 1-8 2.5", 0.6" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: Low Profile, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD630 Photography - Eight 3.5" disk bays*

*Some models in pictures below contain optional add-in ethernet adapter, please see O-RDS for more RD630 accessories

ThinkServer™



- Up to two Intel® Xeon® E5-2600 series processors, up to 8 cores/16 threads per processor
- Up to 320GB ECC RDIMM memory (20x16GB) or 256GB ECC LV RDIMM memory (16x16GB)
- Up to eight 3.5" hot-swap disk bays
- Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter
- Up to two power supplies with redundant, hot-swap, 80 PLUS® Gold qualified
- Up to six fans (5+1 redundant), hot-swap

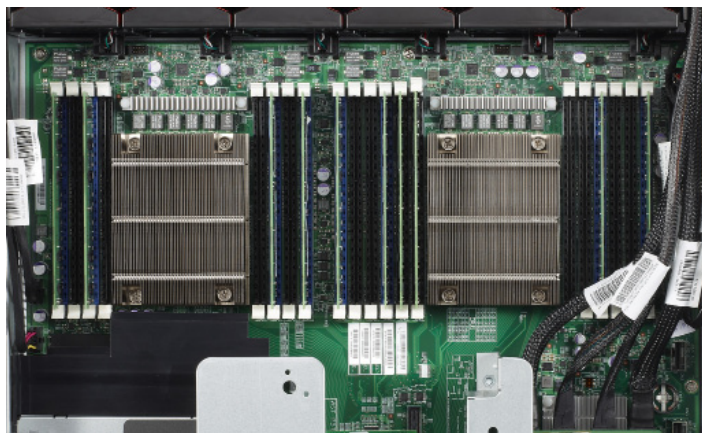
ThinkServer RD630 Photography - 2.5" disk bays *

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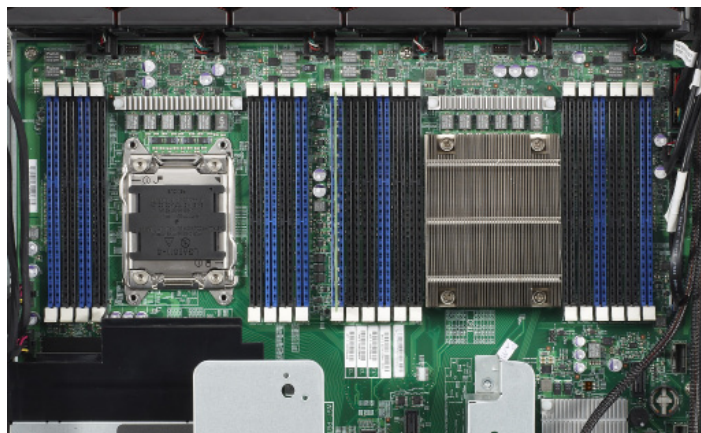
** Some models in pictures below contain optional add-in ethernet adapter, please see O-RDS for more RD630 accessories*



- Up to two Intel® Xeon® E5-2600 series processors, up to 8 cores/16 threads per processor
- Up to 320GB ECC RDIMM memory (20x16GB) or 256GB ECC LV RDIMM memory (16x16GB)
- Up to sixteen 2.5" hot-swap disk bays
- Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter
- Up to two power supplies with redundant, hot-swap, 80 PLUS® Gold qualified
- Up to six fans (5+1 redundant), hot-swap



Dual processors



Single processor



2.5" Hot-swap disk bay



2.5" Hot-swap disk bay



2.5" Hot-swap SAS 6.0Gb/s hard drive



3.5" Hot-swap SAS 6.0Gb/s hard drive



ThinkServer RAID 700 Adapter with battery
(LSI® SAS 9260-8i with iBBU08)



ThinkServer RAID 700 Adapter with battery
(LSI SAS 9260-8i with iBBU08)



ThinkServer 800W Hot-Swap power supply
for ThinkServer RD530/RD630
(80 PLUS® Gold qualified,
redundant with two power supplies)



Intelligent Diagnostics Module Premium

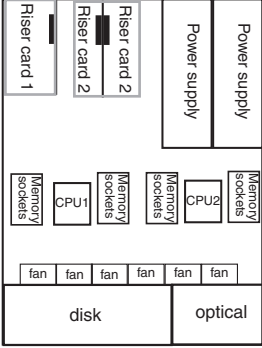
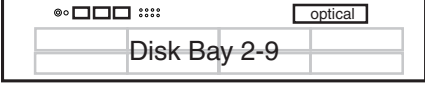
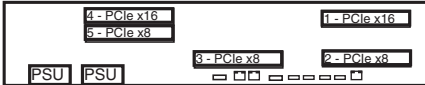


ThinkServer RD630 rear I/O ports

ThinkServer RD630 with 3.5" Disk Bay (2579) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2579-A2U	1xE5-2640	1333MHz RDIMM	1x4GB	No	700	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iPMI	No	No	1
2579-A3U	1xE5-2640	1333MHz RDIMM	1x4GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	1
2579-A4U	1xE5-2650	1333MHz RDIMM	1x8GB	No	700	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iPMI	No	No	1
2579-A5U	1xE5-2650	1333MHz RDIMM	2x8GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2579-A6U	1xE5-2620	1333MHz RDIMM	1x4GB	No	700	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iPMI	No	No	1
2579-A7U	1xE5-2670	1333MHz RDIMM	1x16GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2579-A8U	1xE5-2670	1333MHz RDIMM	1x8GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2

Limited warranty	3-year parts and labor; more Lenovo Services see S-RDS sheet						2U Rack top								
Processor	Up to two processors, one or two processors standard, Intel Xeon E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz) Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz) Two LGA2011 sockets														
Implementation	Two LGA2011 sockets														
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; <i>RDIMM:</i> twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) <i>LV RDIMM:</i> sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 						<p>Front</p> <p>optical</p> <p>Disk Bay 2-9</p> <p>Rear</p> <p>4 - PCIe x16 3 - PCIe x8 1 - PCIe x16 3 - PCIe x8 2 - PCIe x8 PSU PSU</p> <p>Slot 4, 5 are available on dual processors models only</p>								
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz						<p>Mechanical</p> <ul style="list-style-type: none"> 2U rack 19"W x 28.9"D x 3.45"H (with rack handles) 482.4mm W x 734mm D x 87.6mm H (with rack handles) 26.5 kg (58.42 lb) when fully configured 								
Disk bays	Eight 3.5" hot-swap SATA/SAS disk bays						<p>Disk Bays</p> <p>Bay 1 5.25", 0.5" high, external, for optical</p> <p>Bay 2-9 3.5", 1" high, external, for disk</p>								
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (IBBU08) for RAID 700						<p>Expansion Slots</p> <p>Slot 1: half-length, full-height, PCI Express 3.0 x16</p> <p>Slot 2: half-length, full-height, PCI Express 3.0 x8</p> <p>Slot 3: Low Profile, PCI Express 3.0 x8</p> <p>Slot 4-5 are available on dual processors models:</p> <p>Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)</p> <p>Slot 5: half-length, full-height, PCI Express 3.0 x8</p>								
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter						<p>Security</p> <ul style="list-style-type: none"> Security chip (selected models, see information on left) Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) 								
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm						<p>Software Management Tools</p> <ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage 								
Tape drive	None						<p>Energy Management Technology</p> <ul style="list-style-type: none"> Intel Power Node Manager Lenovo SmartGrid Manager 								
Optical	DVD±RW or DVD ROM, slim						<p>ENERGY STAR Server 1.1-compliant</p> <p>RoHS-compliant</p>								
Diskette	None (use USB port)						<p>For more accessories, see O-RDS sheet</p>								
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right)														
Riser card	Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Front ports	Two USB 2.0, one analog VGA DB-15 connector														
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models <i>Basic:</i> IDM LED lights indicate failing component category <i>Premium:</i> IDM Premium LED lights indicate individual failing part														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, iPMI 2.0-compliant baseboard management controller (BMC); <i>iKVM:</i> add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; <i>TPM:</i> additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to six fans (5+1 redundant), hot-swap														

ThinkServer RD630 with 3.5" Disk Bay (2577) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2577-A1U	2xE5-2620	1333MHz RDIMM	2x8GB	5	700+Battery	6x500GB 3.5"	SATA 8xHS	SATA/SAS	DVD	Premium	TPM	iKVM	No	No	2

Limited warranty	1-year parts and labor; more Lenovo Services see S-RDS sheet														
Processor	Up to two processors, one or two processors standard, Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)														
Implementation	Two LGA2011 sockets														
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Eight 3.5" hot-swap SATA/SAS disk bays														
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter														
Disk(s)	3.5" SATA: SATA 6.0Gb/s, 7200 rpm 3.5" SAS: SAS 6.0Gb/s, 15000 rpm														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management														
Riser card	(See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Front ports	Two USB 2.0, one analog VGA DB-15 connector														
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Systems mgmt															
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to six fans (5+1 redundant), hot-swap														

2U Rack top

Front

Rear

Slot 4, 5 are available on dual processors models only

Mechanical

- 2U rack
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

Disk Bays

Bay 1	5.25", 0.5" high, external,	for optical
Bay 2-9	3.5", 1" high, external,	for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16

Slot 2: half-length, full-height, PCI Express 3.0 x8

Slot 3: Low Profile, PCI Express 3.0 x8

Slot 4-5 are available on dual processors models:

Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)

Slot 5: half-length, full-height, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR Server 1.1-compliant

RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD630 with 3.5" Disk Bay (2592)

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2592-A1U	1xE5-2650	1333MHz RDIMM	1x8GB	No	700+Battery		8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2592-A2U	1xE5-2620	1333MHz RDIMM	1x4GB	No	700		8xHS	SATA/SAS	DVD±RW	Premium	TPM	IPMI	No	No	1
2592-A3U	1xE5-2670	1333MHz RDIMM	1x16GB	No	700+Battery		8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2592-A4U	1xE5-2650	1333MHz RDIMM	6x8GB	No	700+Battery	4x300GB 3.5" SAS	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2592-A5U	1xE5-2620	1333MHz RDIMM	3x8GB	No	700+Battery	3x500GB 3.5" SATA	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2592-A6U	2xE5-2670	1333MHz RDIMM	6x16GB	No	700+Battery	4x300GB 3.5" SAS	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2

Limited warranty **3-year** parts and labor; more Lenovo Services see S-RDS sheet

Processor
Up to two processors, one or two processors standard, **Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2)**, Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Implementation
Two LGA2011 sockets

Memory
RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; **RDIMM:** twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB)
LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)
Additional memory disclaimers

- Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs
- Over twelve RDIMMs requires dual processors
- Over eight LV RDIMMs requires dual processors
- Mixing of RDIMM and LV RDIMM is not supported

Graphics
Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz

Disk bays
Eight 3.5" hot-swap SATA/SAS disk bays
Disk controller
RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support
Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support
RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support
Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700
RAID Support
Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter

Disk(s)
3.5" SATA: SATA 6.0Gb/s, 7200 rpm
3.5" SAS: SAS 6.0Gb/s, 15000 rpm

Tape drive
None
Optical
DVD±RW or DVD ROM, slim
Diskette
None (use USB port)

Chipset
Intel C602J Chipset

Ethernet
Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5
Riser card
Two USB 2.0, one analog VGA DB-15 connector
Front ports
Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector
Rear ports
Supports IDM or IDM Premium on selected models

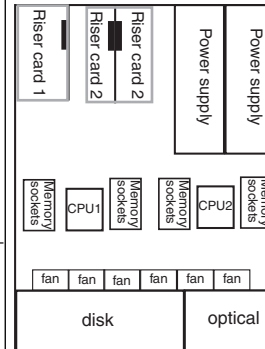
Intelligent Diagnostics Module (IDM)
Basic: IDM LED lights indicate failing component category
Premium: IDM Premium LED lights indicate individual failing part
Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC);
iKVM: add-on ThinkServer Management Module Premium for iKVM functions

Systems mgmt
Security chip
No onboard TPM chip;
TPM: additional add-on card for TPM function, TCG 1.2-compliant

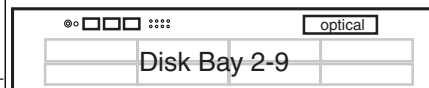
Prerequisites
SATA/SAS disk, OS
Keyboard/mouse
None (use USB port)
Power supply
One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies

Rack kit
Includes rack kit
Cable management
Optional cable management arm on selected models
Cooling
Up to six fans (5+1 redundant), hot-swap

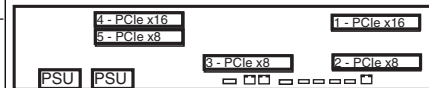
2U Rack top



Front



Rear



Slot 4, 5 are available on dual processors models only

Mechanical

- 2U rack
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

Disk Bays

Bay 1 5.25", 0.5" high, external, for optical
Bay 2-9 3.5", 1" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: half-length, full-height, PCI Express 3.0 x8
Slot 3: Low Profile, PCI Express 3.0 x8
Slot 4-5 are available on dual processors models:
Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)
Slot 5: half-length, full-height, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

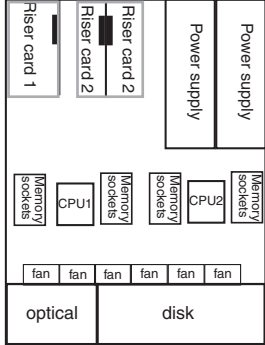
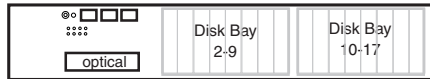
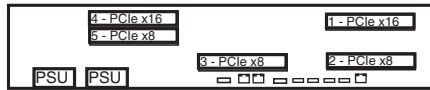
- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD630 with 2.5" Disk Bay (2594) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2594-A1U	1xE5-2620	1333MHz RDIMM	2x4GB	No	500	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	IPMI	No	No	1
2594-A2U	1xE5-2640	1333MHz RDIMM	2x4GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2594-A3U	1xE5-2660	1333MHz RDIMM	2x8GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2594-A4U	1xE5-2620	1333MHz RDIMM	1x4GB	No	500	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	1
2594-A5U	1xE5-2640	1333MHz RDIMM	1x4GB	No	700	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2594-A6U	1xE5-2640	1333MHz RDIMM	1x8GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2594-A7U	1xE5-2670	1333MHz RDIMM	1x16GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2594-A9U	1xE5-2620	1333MHz RDIMM	1x4GB	No	700	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	IPMI	No	No	1
2594-ADU	1xE5-2670	1333MHz RDIMM	1x8GB	No	700	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	IPMI	No	No	1
2594-AEU	1xE5-2690	1333MHz RDIMM	1x16GB	No	700+Battery	None	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
Limited warranty	3-year parts and labor; more Lenovo Services see S-RDS sheet														
Processor	Up to two processors, one or two processors standard, Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2660 processor (8C/16T, 2.2GHz, 20MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1600MHz) Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz) Intel Xeon E5-2690 processor (8C/16T, 2.9GHz, 20MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.8GHz), 4-channel DDR3 memory controller (up to 1600MHz) Two LGA2011 sockets							2U Rack top 							
Implementation	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)							Front  <p>Bay 10-17 are available on sixteen disk bays models only</p>							
Memory	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 							Rear  <p>Slot 4, 5 are available on dual processors models only</p>							
Additional memory disclaimers								Mechanical <ul style="list-style-type: none"> 2U rack 19"W x 28.9"D x 3.45"H (with rack handles) 482.4mm W x 734mm D x 87.6mm H (with rack handles) 26.5 kg (58.42 lb) when fully configured 							
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz							Disk Bays <p>Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 2.5", 0.6" high, external, for disk Bay 10-17 are available on sixteen 2.5" disk bays models: Bay 10-17 2.5", 0.6" high, external, for disk</p>							
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays (Sixteen 2.5" disk bays availability on August 2012)							Expansion Slots <p>Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 3.0 x8 Slot 3: Low Profile, PCI Express 3.0 x8 Slot 4-5 are available on dual processors models: Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8</p>							
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (IBBU08) for RAID 700							Security <ul style="list-style-type: none"> Security chip (selected models, see information on left) Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) 							
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter							Software Management Tools <ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage 							
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"							Energy Management Technology <ul style="list-style-type: none"> Intel Power Node Manager Lenovo® SmartGrid Manager 							
Tape drive	None							ENERGY STAR® Server 1.1-compliant RoHS-compliant							
Optical	DVD±RW or DVD ROM, slim							For more accessories, see O-RDS sheet							
Diskette	None (use USB port)														
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Riser card															
Front ports	Two USB 2.0, one analog VGA DB-15 connector														
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to six fans (5+1 redundant), hot-swap														

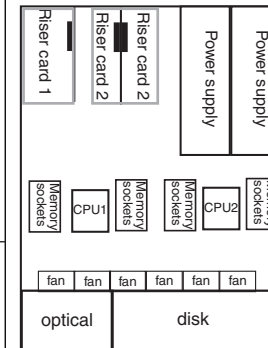
ThinkServer RD630 with 2.5" Disk Bay (2594) - TopSeller (August 2012)

Product Specifications Reference (PSREF)

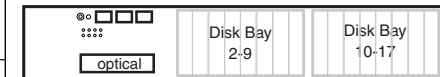
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2594-A8U	1xE5-2620	1333MHz RDIMM	1x8GB	No	700+Battery	No	16xHS	SATA/SAS	DVD±RW	Premium	TPM	IPMI	No	No	1
2594-AAU	1xE5-2640	1333MHz RDIMM	1x8GB	No	700+Battery	No	16xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	1
2594-ABU	2xE5-2650	1333MHz RDIMM	2x8GB	No	700+Battery	No	16xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2594-ACU	1xE5-2650	1333MHz RDIMM	1x8GB	No	700+Battery	No	16xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2

Limited warranty	3-year parts and labor; more Lenovo Services see S-RDS sheet														
Processor	Up to two processors, one or two processors standard, Intel Xeon E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2640 processor (6C/12T, 2.5GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.0GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz) Two LGA2011 sockets														
Implementation	Two LGA2011 sockets														
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays														
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter														
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Riser card	Two USB 2.0, one analog VGA DB-15 connector														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Rear ports	Supports IDM or IDM Premium on selected models Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Intelligent Diagnostics Module (IDM)	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Systems mgmt	SATA/SAS disk, OS None (use USB port) One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Security chip															
Prerequisites															
Keyboard/mouse															
Power supply															
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to six fans (5+1 redundant), hot-swap														

2U Rack top

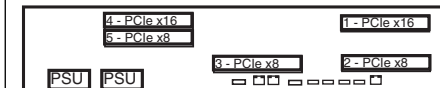


Front



Bay 10-17 are available on sixteen disk bays models only

Rear



Slot 4, 5 are available on dual processors models only

Mechanical

- 2U rack
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

Disk Bays

- Bay 1 5.25", 0.5" high, external, for optical
- Bay 2-9 2.5", 0.6" high, external, for disk
- Bay 10-17 are available on sixteen 2.5" disk bays models:
- Bay 10-17 2.5", 0.6" high, external, for disk

Expansion Slots

- Slot 1: half-length, full-height, PCI Express 3.0 x16
- Slot 2: half-length, full-height, PCI Express 3.0 x8
- Slot 3: Low Profile, PCI Express 3.0 x8
- Slot 4-5 are available on dual processors models:
- Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)
- Slot 5: half-length, full-height, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

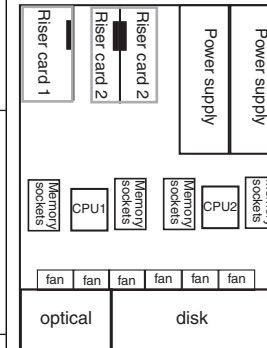
ThinkServer RD630 with 2.5" Disk Bay (2593) - TopSeller

Product Specifications Reference (PSREF)

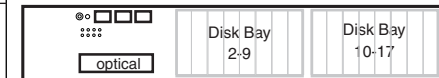
Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2593-A1U	2xE5-2620	1333MHz	RDIMM 2x8GB		700+Battery	5x600GB 2.5" SAS	8xHS	SATA/SAS	DVD	Premium	TPM	iKVM	No	No	2
2593-A2U	2xE5-2620	1333MHz	RDIMM 2x8GB	5	700+Battery	6x600GB 2.5" SAS	8xHS	SATA/SAS	DVD	Premium	TPM	iKVM	No	No	2

Limited warranty	1-year parts and labor; more Lenovo Services see S-RDS sheet														
Processor	Up to two processors, one or two processors standard, Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)														
Implementation	Two LGA2011 sockets														
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)														
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 														
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz														
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays (Sixteen 2.5" disk bays availability on August 2012)														
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700														
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter														
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"														
Tape drive	None														
Optical	DVD±RW or DVD ROM, slim														
Diskette	None (use USB port)														
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management														
Riser card	(See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Front ports	Two USB 2.0, one analog VGA DB-15 connector														
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part														
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to six fans (5+1 redundant), hot-swap														

2U Rack top



Front



Bay 10-17 are available on sixteen disk bays models only

Rear



Slot 4, 5 are available on dual processors models only

Mechanical

- 2U rack
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

Disk Bays

- Bay 1 5.25", 0.5" high, external, for optical
- Bay 2-9 2.5", 0.6" high, external, for disk
- Bay 10-17 are available on sixteen 2.5" disk bays models:
- Bay 10-17 2.5", 0.6" high, external, for disk

Expansion Slots

- Slot 1: half-length, full-height, PCI Express 3.0 x16
- Slot 2: half-length, full-height, PCI Express 3.0 x8
- Slot 3: Low Profile, PCI Express 3.0 x8
- Slot 4-5 are available on dual processors models:
- Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)
- Slot 5: half-length, full-height, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD630 with 2.5" Disk Bay (2595)

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2595-A1U	1xE5-2620	1333MHz RDIMM	1x8GB	No	700		8xHS	SATA/SAS	DVD±RW	Basic	TPM	IPMI	No	No	1
2595-A2U	1xE5-2650	1333MHz RDIMM	1x16GB	No	700+Battery		8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2595-A5U	1xE5-2650	1333MHz RDIMM	6x8GB	No	700+Battery	4x300GB 2.5" SAS	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2595-A6U	1xE5-2620	1333MHz RDIMM	3x8GB	No	700+Battery	4x300GB 2.5" SAS	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2595-A7U	2xE5-2670	1333MHz RDIMM	6x16GB	No	700+Battery	4x300GB 2.5" SAS	8xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2

Limited warranty **3-year** parts and labor; more Lenovo Services see S-RDS sheet

Processor
Up to two processors, one or two processors standard,
Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2), Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz)
Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Intel Xeon E5-2670 processor (8C/16T, 2.6GHz, 20MB, 8.0 GT/s QPI x2), Turbo Boost 2.0 (up to 3.3GHz), 4-channel DDR3 memory controller (up to 1600MHz)
Two LGA2011 sockets

Implementation
Two LGA2011 sockets

Memory
RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin;
RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB)
LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)

Additional memory disclaimers

- Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs
- Over twelve RDIMMs requires dual processors
- Over eight LV RDIMMs requires dual processors
- Mixing of RDIMM and LV RDIMM is not supported

Graphics
Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear;
Maximum resolution: 1920x1200@60Hz

Disk bays
Eight or sixteen 2.5" hot-swap SATA/SAS disk bays (Sixteen 2.5" disk bays availability on August 2012)

Disk controller
RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support
Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support
RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support
Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700

RAID Support
Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter

Disk(s)
2.5" SAS: SAS 6.0Gb/s, 10000 rpm
SSD: Solid State Drive, 2.5"

Tape drive
None
Optical
DVD±RW or DVD ROM, slim
Diskette
None (use USB port)

Chipset
Intel C602J Chipset

Ethernet
Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5

Riser card
Two USB 2.0, one analog VGA DB-15 connector
Front ports
Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector

Intelligent Diagnostics Module (IDM)
Supports IDM or IDM Premium on selected models
Basic: IDM LED lights indicate failing component category
Premium: IDM Premium LED lights indicate individual failing part

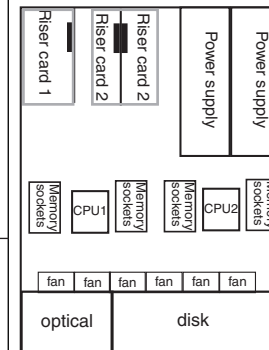
Systems mgmt
Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC);
iKVM: add-on ThinkServer Management Module Premium for iKVM functions

Security chip
No onboard TPM chip;
TPM: additional add-on card for TPM function, TCG 1.2-compliant

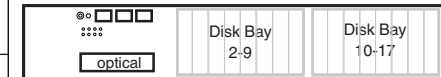
Prerequisites
Keyboard/mouse
None (use USB port)
Power supply
One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies

Rack kit
Includes rack kit
Cable management
Optional cable management arm on selected models
Cooling
Up to six fans (5+1 redundant), hot-swap

2U Rack top



Front



Bay 10-17 are available on sixteen disk bays models only

Rear



Slot 4, 5 are available on dual processors models only

Mechanical

- 2U rack
- 19"W x 28.9"D x 3.45"H (with rack handles)
- 482.4mm W x 734mm D x 87.6mm H (with rack handles)
- 26.5 kg (58.42 lb) when fully configured

Disk Bays

Bay 1 5.25", 0.5" high, external, for optical
Bay 2-9 2.5", 0.6" high, external, for disk
Bay 10-17 are available on sixteen 2.5" disk bays models:
Bay 10-17 2.5", 0.6" high, external, for disk

Expansion Slots

Slot 1: half-length, full-height, PCI Express 3.0 x16
Slot 2: half-length, full-height, PCI Express 3.0 x8
Slot 3: Low Profile, PCI Express 3.0 x8
Slot 4-5 are available on dual processors models:
Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec)
Slot 5: half-length, full-height, PCI Express 3.0 x8

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Energy Management Technology

- Intel Power Node Manager
- Lenovo® SmartGrid Manager

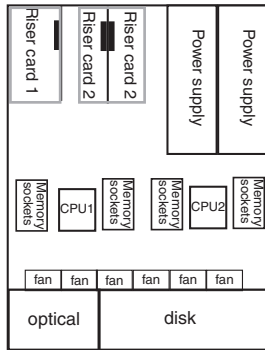
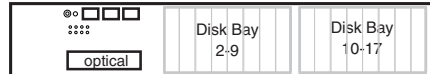

ENERGY STAR® Server 1.1-compliant
RoHS-compliant

For more accessories, see O-RDS sheet

ThinkServer RD630 with 2.5" Disk Bay (2595) - August 2012

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	Disk type	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2595-A3U	1xE5-2650	1333MHz RDIMM	1x8GB	No	700+Battery	No	16xHS	SATA/SAS	DVD±RW	Premium	TPM	iKVM	No	No	2
2595-A4U	1xE5-2620	1333MHz RDIMM	1x8GB	No	700+Battery	No	16xHS	SATA/SAS	DVD±RW	Premium	TPM	IPMI	No	No	2

Limited warranty	3-year parts and labor; more Lenovo Services see S-RDS sheet							2U Rack top 							
Processor	Up to two processors, one or two processors standard, Intel® Xeon® E5-2620 processor (6C/12T, 2.0GHz, 15MB, 7.2 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.5GHz), 4-channel DDR3 memory controller (up to 1333MHz) Intel Xeon E5-2650 processor (8C/16T, 2.0GHz, 20MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 2.8GHz), 4-channel DDR3 memory controller (up to 1600MHz) Two LGA2011 sockets							Front  <p>Bay 10-17 are available on sixteen disk bays models only</p>							
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; RDIMM: twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) LV RDIMM: sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)							Rear  <p>Slot 4, 5 are available on dual processors models only</p>							
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs Over twelve RDIMMs requires dual processors Over eight LV RDIMMs requires dual processors Mixing of RDIMM and LV RDIMM is not supported 							Mechanical <ul style="list-style-type: none"> 2U rack 19"W x 28.9"D x 3.45"H (with rack handles) 482.4mm W x 734mm D x 87.6mm H (with rack handles) 26.5 kg (58.42 lb) when fully configured 							
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz							Disk Bays <p>Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 2.5", 0.6" high, external, for disk Bay 10-17 are available on sixteen 2.5" disk bays models: Bay 10-17 2.5", 0.6" high, external, for disk</p>							
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays							Expansion Slots <p>Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 3.0 x8 Slot 3: Low Profile, PCI Express 3.0 x8 Slot 4-5 are available on dual processors models: Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8</p>							
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI® SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support Upgrade for 500: Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support Battery for 700: Intelligent Battery Backup Unit (iBBU08) for RAID 700							Security <ul style="list-style-type: none"> Security chip (selected models, see information on left) Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) 							
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter							Software Management Tools <ul style="list-style-type: none"> ThinkServer EasyStartup ThinkServer EasyManage 							
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"							Energy Management Technology <ul style="list-style-type: none"> Intel Power Node Manager Lenovo® SmartGrid Manager 							
Tape drive	None							ENERGY STAR® Server 1.1-compliant RoHS-compliant							
Optical	DVD±RW or DVD ROM, slim							For more accessories, see O-RDS sheet							
Diskette	None (use USB port)														
Chipset	Intel C602J Chipset														
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5														
Riser card	Two USB 2.0, one analog VGA DB-15 connector														
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector														
Rear ports	Supports IDM or IDM Premium on selected models Basic: IDM LED lights indicate failing component category Premium: IDM Premium LED lights indicate individual failing part Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); iKVM: add-on ThinkServer Management Module Premium for iKVM functions														
Intelligent Diagnostics Module (IDM)															
Systems mgmt															
Security chip	No onboard TPM chip; TPM: additional add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	SATA/SAS disk, OS														
Keyboard/mouse	None (use USB port)														
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies														
Rack kit	Includes rack kit														
Cable management	Optional cable management arm on selected models														
Cooling	Up to six fans (5+1 redundant), hot-swap														

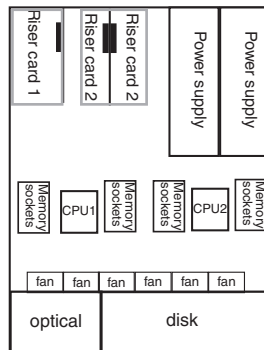
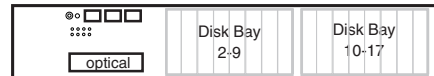
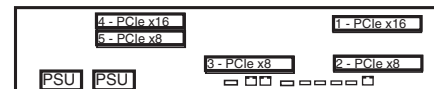
ThinkServer RD630 with 2.5" Disk Bay (2595) - Vectorwise Appliance

Product Specifications Reference (PSREF)

Type-model	Processor(s)	Memory (MHz/type)	Memory DIMMs	Pre-conf RAID	Disk controller	Disk(s)	Disk bays	SATA optical	Intelligent Diagnostics	TPM	System mgmt	Cable mgmt	Preload OS	PSU qty
2595-A8U	1xE5-2643	1333MHz RDIMM	8x8GB	10	700+Battery	4x300GB 2.5" SAS	8xHS	DVD±RW	Premium	TPM	iKVM	No	Win2008E R2	2
2595-A9U	2xE5-2667	1333MHz RDIMM	16x8GB	6	700+Battery	8x300GB 2.5" SAS	8xHS	DVD±RW	Premium	TPM	iKVM	No	Win2008E R2	2
2595-AAU	2xE5-2667	1333MHz RDIMM	16x8GB	6	700+Battery	8x300GB 2.5" SAS	8xHS	DVD±RW	Premium	TPM	iKVM	No	RHEL 6.0	2

- These models are ThinkServer solutions for Vectorwise Data Mart Appliance for more information please see www.actian.com/products/vectorwise/vectorwise-datamart-appliance

Limited warranty	3-year parts and labor; more Lenovo Services see S-RDS sheet	
Processor	Up to two processors, one or two processors standard, Intel Xeon E5-2643 processor (4C/8T, 3.3GHz, 10MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.5GHz), 4-channel DDR3 memory controller (up to 1600MHz) Intel Xeon E5-2667 processor (6C/12T, 2.9GHz, 15MB, 8.0 GT/s QPI x2) , Turbo Boost 2.0 (up to 3.5GHz), 4-channel DDR3 memory controller (up to 1600MHz)	
Implementation	Two LGA2011 sockets	
Memory	RDIMM or LV RDIMM, DDR3, ECC, 4-channel per processor, 240-pin; <i>RDIMM:</i> twenty sockets (12 sockets for CPU1, 8 sockets for CPU2), 320GB max (20x16GB) <i>LV RDIMM:</i> sixteen sockets (8 of 12 sockets available for CPU1, 8 sockets for CPU2), 256GB max (16x16GB)	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed depends on processor memory controller speed, installed memory speed, and quantity of memory DIMMs• Over twelve RDIMMs requires dual processors• Over eight LV RDIMMs requires dual processors• Mixing of RDIMM and LV RDIMM is not supported	
Graphics	Onboard Aspeed AST2300 graphics/management processor, one VGA DB-15 on front, one VGA DB-15 on rear; Maximum resolution: 1920x1200@60Hz	
Disk bays	Eight or sixteen 2.5" hot-swap SATA/SAS disk bays	
Disk controller	RAID 500: ThinkServer RAID 500 adapter (LSI SAS 9240-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support <i>Upgrade for 500:</i> Additional upgrade key for RAID 500 adapter, add RAID 5, 50 support RAID 700: ThinkServer RAID 700 adapter (LSI SAS 9260-8i), PCI Express bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support <i>Battery for 700:</i> Intelligent Battery Backup Unit (iBBU08) for RAID 700	
RAID Support	Up to RAID 0, 1, 5, 6, 10, 50, 60 via ThinkServer RAID 700 adapter	
Disk(s)	2.5" SAS: SAS 6.0Gb/s, 10000 rpm SSD: Solid State Drive, 2.5"	
Tape drive	None	
Optical	DVD±RW or DVD ROM, slim	
Diskette	None (use USB port)	
Chipset	Intel C602J Chipset	
Ethernet	Two Gigabit Ethernet ports by Intel i350, one Gigabit Ethernet port by Intel 82574L, dedicate/share management (See Right) Riser card 1 for slot 1-2, riser card 2 for slot 3-5	
Riser card	Two USB 2.0, one analog VGA DB-15 connector	
Front ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one RJ-45 (dedicate/share mgmt), one analog VGA DB-15 connector	
Rear ports		
Intelligent Diagnostics Module (IDM)	Supports IDM or IDM Premium on selected models <i>Basic:</i> IDM LED lights indicate failing component category <i>Premium:</i> IDM Premium LED lights indicate individual failing part	
Systems mgmt	Onboard Aspeed AST2300 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>iKVM:</i> add-on ThinkServer Management Module Premium for iKVM functions	
Security chip	No onboard TPM chip; <i>TPM:</i> additional add-on card for TPM function, TCG 1.2-compliant	
Prerequisites	SATA/SAS disk, OS	
Keyboard/mouse	None (use USB port)	
Power supply	One or two 800 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies	
Rack kit	Includes rack kit	
Cable management	Optional cable management arm on selected models	
Cooling	Up to six fans (5+1 redundant), hot-swap	
Preloaded Operating System		
A8U:	Genuine Windows Server 2008 R2 Enterprise, Vectorwise 100GB limitation per unit	
A9U:	Genuine Windows Server 2008 R2 Enterprise, Vectorwise 1TB limitation per unit	
AAU:	Red Hat Enterprise Linux 6.0, Vectorwise 1TB limitation per unit	

2U Rack top	
	
Front	
	
Bay 10-17 are available on sixteen disk bays models only	
Rear	
	
Slot 4, 5 are available on dual processors models only	
Mechanical	
<ul style="list-style-type: none">• 2U rack• 19"W x 28.9"D x 3.45"H (with rack handles)• 482.4mm W x 734mm D x 87.6mm H (with rack handles)• 26.5 kg (58.42 lb) when fully configured	
Disk Bays	
Bay 1 5.25", 0.5" high, external, for optical Bay 2-9 2.5", 0.6" high, external, for disk Bay 10-17 are available on sixteen 2.5" disk bays models: Bay 10-17 2.5", 0.6" high, external, for disk	
Expansion Slots	
Slot 1: half-length, full-height, PCI Express 3.0 x16 Slot 2: half-length, full-height, PCI Express 3.0 x8 Slot 3: Low Profile, PCI Express 3.0 x8 Slot 4-5 are available on dual processors models: Slot 4: half-length, full-height, PCI Express 3.0 x16 (x8 elec) Slot 5: half-length, full-height, PCI Express 3.0 x8	
Security	
<ul style="list-style-type: none">• Security chip (selected models, see information on left)• Administrator password• User password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)	
Software Management Tools	
<ul style="list-style-type: none">• ThinkServer EasyStartup• ThinkServer EasyManage	
Energy Management Technology	
<ul style="list-style-type: none">• Intel Power Node Manager• Lenovo SmartGrid Manager	
ENERGY STAR Server 1.1-compliant RoHS-compliant	
For more accessories, see O-RDS sheet	

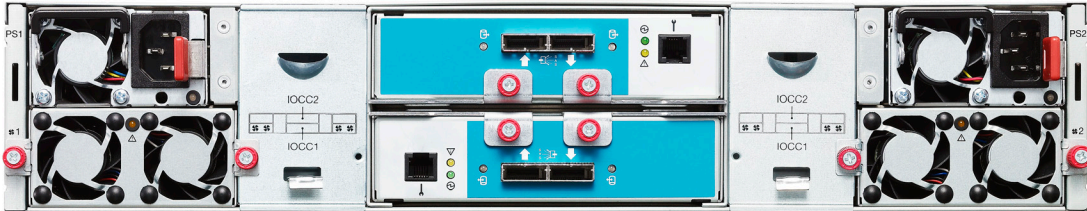
See footnotes for important warranty information
US model(s) announced August 28, 2012

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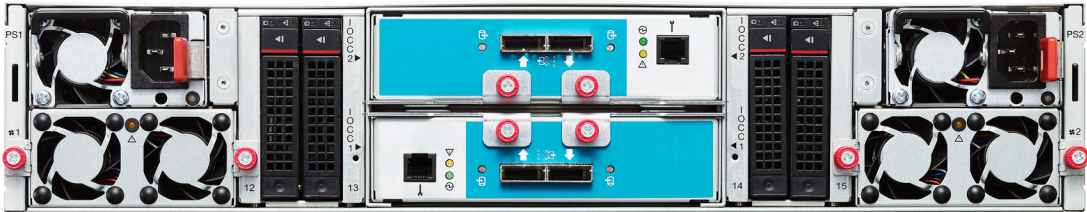
ThinkServer SA120 Direct Attached Storage Photography



Front View



Rear View
(With optional 2nd I/O module and 2nd power supply)



Rear View
(With optional 4 x 2.5" SATA SSD hot-swap disk drive bays, 2nd I/O module, and 2nd power supply)

ThinkServer SA120 Direct Attached Storage - Standard Models

Product Specifications Reference (PSREF)

Type	Type-model	I/O Module (1 or 2)	Front 12 x 3.5" disk bays for SAS disk drives	Rear 4 x 2.5" disk bays for SATA SSD	Front 3.5" SAS hot-swap drives (up to 12)	Rear 2.5" SATA SSD hot-swap drives (up to 4)	External minSAS Cable (SFF8088 to SFF8088)	Power Supply (1 or 2)	Rail kit	Base Warranty
70F0	70F00000UX	1	12 x 3.5"	No	Open	No	No	1 x 550W	Rail kit	3
70F0	70F00001UX	1	12 x 3.5"	No	12 x 1TB 3.5" SAS	No	1 x 0.5m	1 x 550W	Rail kit	3
70F0	70F00002UX	2	12 x 3.5"	No	12 x 2TB 3.5" SAS	No	1 x 0.5m	2 x 550W	Rail kit	3
70F0	70F00003UX	2	12 x 3.5"	No	12 x 4TB 3.5" SAS	No	1 x 0.5m	2 x 550W	Rail kit	3
70F1	70F10000UX	1	12 x 3.5"	No	Open	No	1 x 0.5m	1 x 550W	Rail kit	3
70F1	70F10001UX	2	12 x 3.5"	No	Open	No	1 x 0.5m	2 x 550W	Rail kit	3

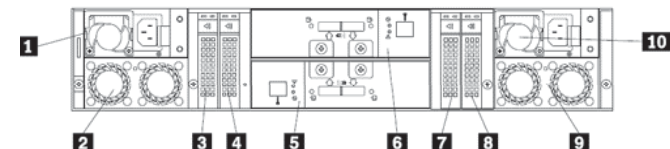
Connection mode	Connects directly to host server, up to 4 enclosures per port (cascading mode)			
Compatible host server and RAID controllers/Host Bus adapters	Supports the following RAID controller or Host Bus adapters on compatible host servers, RAID levels are supported by RAID controller on host server:			
	RAID/HBA adapters	PN	TD340 RD340 RD440 RD540 RD640	RD330 RD430 RD530 RD630
	LSI 9280-8e 6Gb SAS RAID HBA by LSI (0/1/10/5/50/6/60)	4XB0F28645	Yes	Yes
	LSI 9286CV-8e 6Gb SAS RAID HBA by LSI (0/1/10/5/50/6/60)	4XB0F28646	Yes	
I/O Module	Supports 1 or 2 ThinkServer Storage Array 6Gbps I/O Modules, redundant with two I/O modules			
Front 3.5" Disk Bays	12 x 3.5" SAS hard drive bays, hot-swap, supports 1TB/2TB/3TB/4TB 3.5" SAS 6.0Gb/s 7200 rpm hard drives			
Rear 2.5" Disk Bays (optional)	Optional 4 x 2.5" SATA SSD hot-swap disk drive bays. Requires optional ThinkServer 2.5" SATA SSD Cage with SATA Interposers (4XF0F28766, includes two SSD cages for 4 bays)			
Maximum storage per enclosure	Front 3.5" Disk Bays: up to 48TB (using 12 x 4TB 3.5" SAS hard drives) Optional rear 2.5" Disk Bays: up to 3.2TB (using 4 x 800GB 2.5" SSD drives)			
External minSAS Cable (option)	Optional 0.5m/1.0m/2.0m/4.0m/6.0m SFF8088 to SFF8088 26-pin Mini-SAS cables			
Fan module	Two fan modules standard, hot-swap, redundant, two fans per fan module			
Power supply	One or two 550 watts standard, two maximum, rear access, hot-swap, 80 PLUS Gold qualified, redundant with two power supplies			
Rail kit	Includes static rail kit for rack mount			
Systems Management	• SCSI Enclosure Services (SES) command set • Enclosure management via IOCC controller • Includes one RS232 to RJ11 cable for remote debug and firmware upgrade			
Mechanical	• 2U rack, static rail kit included • 19"W x 15.51"D x 3.4"H (with rack handles) • 482.6mm W x 394.05mm D x 86.6mm H (with rack handles) • 22 kg (48.5 lb) when fully configured			
Environment	• Air temperature: Operating: 10°C to 35°C (50°F to 95°F) Storage: -40°C to 70°C (-40°F to 158°F) in original package • Altitude: 0-10000ft (0-3048m), unpressurized • Humidity: Operating: 8% to 80% (non-condensing) Storage without package: 8% to 80% (non-condensing) Storage with package: 8% to 90% (non-condensing)			

Front



12 x 3.5" hot-swap SAS disk drive bays

Rear



- | | | | |
|---------|----------------------------------------------|----|---------------------------|
| 1 | Power Supply 1 | 5 | I/O module 1 |
| 2/9 | Fan modules | 6 | I/O module 2 (optional) |
| 3/4/7/8 | Rear 4 x 2.5" SATA SSD drive bays (optional) | 10 | Power Supply 2 (optional) |

Rear Ports (per I/O module)

- 1 SAS (SFF8088) IN connector for connection to host server
- 1 SAS (SFF8088) OUT connector for connection to another enclosure
- 1 RJ-11 port for remote debug and firmware upgrade

Core Options

3.5" 1TB 7.2K SAS 6Gbps Hot Swap Hard Drive	0C19530
3.5" 2TB 7.2K SAS 6Gbps Hot Swap Hard Drive	0C19531
3.5" 3TB 7.2K SAS 6Gbps Hot Swap Hard Drive	0C19532
3.5" 4TB 7.2K SAS 6Gbps Hot Swap Hard Drive	4XB0F28635
2.5" 100GB Mainstream Multipurpose SATA 6Gbps Hot Swap SSD	4XB0F28636
2.5" 200GB Mainstream Multipurpose SATA 6Gbps Hot Swap SSD	4XB0F28637
2.5" 400GB Mainstream Multipurpose SATA 6Gbps Hot Swap SSD	4XB0F28638
2.5" 800GB Mainstream Multipurpose SATA 6Gbps Hot Swap SSD	4XB0F28639
2.5" 120GB Value Read-Optimized SATA 6Gbps Hot Swap SSD	4XB0F28615
2.5" 240GB Value Read-Optimized SATA 6Gbps Hot Swap SSD	4XB0F28616
2.5" 300GB Value Read-Optimized SATA 6Gbps Hot Swap SSD	4XB0F28640
2.5" 480GB Value Read-Optimized SATA 6Gbps Hot Swap SSD	4XB0F28617
2.5" 800GB Value Read-Optimized SATA 6Gbps Hot Swap SSD	4XB0F28641
550W Gold Hot Swap Redundant Power Supply	4X20E54689
ThinkServer Storage Array 6Gbps IO Module	4XF0F28765
ThinkServer 2.5" SATA SSD Cage with SATA Interposers (includes two SSD cages for 4 bays)	4XF0F28766
0.5 meters 26 Pin (SFF-8088 to SFF-8088) External mini-SAS cable	4X90F31494
1 meter 26 Pin (SFF-8088 to SFF-8088) External mini-SAS cable	4X90F31495
2 meters 26 Pin (SFF-8088 to SFF-8088) External mini-SAS cable	4X90F31496
4 meters 26 Pin (SFF-8088 to SFF-8088) External mini-SAS cable	4X90F31497
6 meters 26 Pin (SFF-8088 to SFF-8088) External mini-SAS cable	4X90F31498

Disclaimer

Lenovo provides the information in the Product Specifications Reference (PSREF) withdrawn product books on an "AS-IS" basis. Because the actual products have been withdrawn from marketing, the information in these withdrawn product books is no longer maintained or updated. The referenced footnote numbering may not correspond with the listed footnotes.

PSREF books for the withdrawn systems:

http://www.lenovo.com/psref/psrefs_withdrawn.html

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Support Dept., EMEA Services, Lenovo, Eisteinova 21, 851 01 Bratislava, Slovakia. Lenovo makes no representation or warranty regarding third party products or services.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less.

³ **Systems with limited onsite service** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. Support phone list available at www-307.ibm.com/pc/support/site.wss/document.do?Indocid=MIGR-70552

⁴ **SATA/SAS:** The system configuration supports the installation of either SATA or SAS disks. A configuration including both SATA and SAS disks is not supported.

⁷ **Lenovo Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. See Lenovo Warranty Services terms and conditions for complete details and restrictions.

⁸ **RAID:** Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

RAID levels and requirements:

- **RAID 0 (striping)** provides increased performance by writing data across multiple drives.
- **RAID 1 (mirroring)** provides fault tolerance by writing the data on two drives.
- **RAID 5 (striping with parity)** uses distributed parity data to provide fault tolerance more efficiently than RAID 1. Requires three or more drives.
- **RAID 6 (striped set with dual distributed parity)** provides fault tolerance from two drive failures; array continues to operate with up to two failed drives. Requires four drives.
- **RAID 10 (or RAID 1+0)** combines RAID 1 and RAID 0 to create a stripe of mirrors that is fault tolerant while offering increased performance. Requires four drives.
- **RAID 50 (or RAID 5+0)** combines RAID 5 and RAID 0 to create block-level striping with distributed parity improving performance over RAID 5. Requires six drives.
- **RAID 60 (or RAID 6+0)** combines RAID 6 and RAID 0 to create block-level striping with distributed double parity improving performance over RAID 6. Requires eight drives.

¹⁴ **Response times may vary.** Response time is an average target and committed service level. May exclude some holidays. Telephone support may be subject to additional charges.

ThinkServer™

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Visit www.lenovo.com/psref for the latest version of Product Specifications Reference.

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Lenovo
1009 Think Place
Morrisville, NC 27560
U.S.A.

The logo for ThinkVision U.S. features the word "ThinkVision" in a bold, black, sans-serif font, with a red dot above the "i". To the right of "ThinkVision" is a blue rectangular box with a white border, containing the letters "U.S." in a white, sans-serif font.

Product Specifications Reference

Version 451, March 2014

Lenovo Monitors

Version 451, March 2014

ThinkVision® Monitors

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THOSE
WHO DO.

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

Additions in this update

► New product(s)

Lenovo ThinkVision E2223s Wide announced March 2014 (E2223s)

Lenovo ThinkVision E2323 Wide announced March 2014 (E2323)

► New model(s)


None


► Others

None




Changes in this update

► None


<div>Name Case color Type-model Panel Viewable image size Max view area (W x H) Native resolution Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date</div>		<div>E1922 Wide Flat Panel Monitor Business black 60B8AAR6US TFT-LCD, twisted nematic (TN), White LED backlight 18.5" (470mm) diagonal 16.1" x 9.1" / 409.8mm x 230.4mm 1366x768 16:9 .300mm 85 dpi 250 nits or cd/m² (typical) 1000:1 (typical) 5ms (typical) 72% 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt adjustable stand Sides: 0.73" (18.5mm) 13.44" H x 17.65" W x 6.58" D; 341.5mm H x 448.4mm W x 167.2mm D 13.7 watts typical, 17 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 6.03 lb; 2.74 kg 3 year (includes backlight) March 2014</div>	<div>Features</div> <ul style="list-style-type: none">• Widescreen 18.5-inch monitor• Supports HD 1366x768 resolution• Supports VESA mount (100mm)• Mercury free panel and arsenic free glass• Kensington lock slot ready for enhanced security• Support Lenovo Tiny PC via VESA mount• Microsoft® Windows® 7 certified• Microsoft Windows 8 / Windows 8.1 certified				
<div>VESA-compliant² Power management Ergonomics Emission standards Environmental</div>		<div>VESA DPMS-compliant ENERGY STAR® 6.0 ISO 9241-307 FCC Class B TCO (TCO Displays 6.0), WEEE, RoHS, EPEAT™ Gold rating</div>	<div> ThinkVision E1922 Wide Monitor</div>				
<div>Preset resolutions Presets / user settings</div>		<div>VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1366x768 Standard presets: 15 user settings: 16</div>					
<div>Viewing adjustments Rotating screen On screen display Control features Multiple input Monitor connectors Signal cables Mounting features Security</div>		<div>Tilt: 20° backward, -5° forward None On screen display with digital user controls (8 languages) Direct access (control buttons on front) for automatic image setup and adjustment for brightness None VGA 15-pin D-shell, analog, blue detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>					
<div>Ship group</div>		<div>Monitor with stand, 1.8 meter analog signal cable, 1.8 meter black power cord</div>					
<div>Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281</div>		<div>Accessories</div> <table><tr><td>Kensington MicroSaver Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr></table> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>		Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
Kensington MicroSaver Cable Lock	73P2582						
Kensington Twin Head Cable Lock	45K1620						


<div>Name</div> <div>Case color</div> <div>Type-model</div> <div>Panel</div> <div>Viewable image size</div> <div>Max view area (W x H)</div> <div>Native resolution</div> <div>Aspect ratio</div> <div>Pixel pitch (mm)</div> <div>Dot/Pixel per Inch</div> <div>Brightness</div> <div>Contrast ratio</div> <div>Pixel response time</div> <div>Color gamut</div> <div>Viewing angle at 10:1 CR</div> <div>Stand</div> <div>Bezel width</div> <div>Dimensions (HxWxD)</div> <div>Power supply</div> <div>Weight</div> <div>Limited warranty⁴</div> <div>Available date</div>	<div>E2223s Wide Flat Panel Monitor</div> <div>Business black</div> <div>60AFHAR1US</div> <div>TFT-LCD, twisted nematic (TN), White LED backlight</div> <div>21.5" (546mm) diagonal</div> <div>18.7" x 10.5" / 476.1mm x 267.8mm</div> <div>1920x1080</div> <div>16:9</div> <div>.248mm</div> <div>102 dpi</div> <div>200 nits or cd/m² (typical)</div> <div>600:1 (typical)</div> <div>5ms (typical)</div> <div>72%</div> <div>90° (+/- 45°) horizontal, 50° (+/- 25°) vertical</div> <div>Tilt adjustable stand</div> <div>Sides: 0.72" (18.3mm)</div> <div>14.94" H x 20.60" W x 6.58" D;</div> <div>379.4mm H x 514.5mm W x 167.2mm D</div> <div>19 watts typical, 22 watts maximum,</div> <div><0.5 watts standby/suspend, universal,</div> <div>integrated (no external brick-like power supply)</div> <div>7.52 lb; 3.4 kg</div> <div>3 year (includes backlight)</div> <div>March 2014</div>	<div>Features</div> <div>• Widescreen 21.5-inch monitor</div> <div>• Supports FHD 1920x1080 resolution</div> <div>• Supports VESA mount (100mm)</div> <div>• Kensington lock slot ready for enhanced security</div> <div>• Microsoft® Windows® 7 certified</div> <div>• Microsoft Windows 8 certified</div>
<div>Power management</div> <div>Ergonomics</div> <div>Emission standards</div> <div>Environmental</div>	<div>ENERGY STAR® 6.0</div> <div>ISO 9241-307</div> <div>FCC Class B</div> <div>WEEE, RoHS, EPEAT™ SILVER rating</div>	<div></div> <div>ThinkVision E2223s Wide Monitor</div>
<div>Preset resolutions</div>	<div>VGA: 640x350, 640x480, 720x400</div> <div>SVGA: 800x600, 832x624</div> <div>XGA: 1024x768, 1152x864</div> <div>SXGA: 1280x1024</div> <div>WXGA: 1366x768</div> <div>WXGA+: 1440x900, 1600x900</div> <div>WSXGA+: 1680x1050</div> <div>Full HD: 1920x1080</div>	
<div>Presets / user settings</div>	<div>Standard presets: 26</div> <div>user settings: 26</div>	
<div>Viewing adjustments</div> <div>Rotating screen</div> <div>On screen display</div> <div>Control features</div> <div>Multiple input</div> <div>Monitor connectors</div> <div>Signal cables</div> <div>Mounting features</div> <div>Security</div>	<div>Tilt: 22° backward, -5° forward</div> <div>None</div> <div>On screen display with digital user controls (8 languages)</div> <div>Direct access (buttons on front) for automatic image setup, dual input and brightness</div> <div>Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)</div> <div>(1) VGA 15-pin D-shell, analog, blue</div> <div>(2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant</div> <div>(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter</div> <div>(2) detachable, DVI-D at each end, digital, 1.8 meter</div> <div>Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)</div> <div>Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>	
<div>Ship group</div>	<div>Monitor with stand, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord</div>	
<div>Limited Warranty</div> <div>See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281</div>		
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<div><div>Name</div><div>Case color</div><div>Type-model</div><div>Panel</div><div>Viewable image size</div><div>Max view area (W x H)</div><div>Native resolution</div><div>Aspect ratio</div><div>Pixel pitch (mm)</div><div>Dot/Pixel per Inch</div><div>Brightness</div><div>Contrast ratio</div><div>Pixel response time</div><div>Color gamut</div><div>Viewing angle at 10:1 CR</div><div>Stand</div><div>Bezel width</div><div>Dimensions (HxWxD)</div><div>Power supply</div><div>Weight</div><div>Limited warranty⁴</div><div>Available date</div></div> <div><div>E2323 Wide Flat Panel Monitor</div><div>Business black</div><div>60B0HAR1US</div><div>TFT-LCD, twisted nematic (TN), White LED backlight</div><div>23" (584mm) diagonal</div><div>20.0" x 11.3" / 509.2mm x 286.4mm</div><div>1920x1080</div><div>16:9</div><div>.265mm</div><div>96 dpi</div><div>250 nits or cd/m² (typical)</div><div>1000:1 (typical)</div><div>5ms (typical)</div><div>72%</div><div>170° (+/- 85°) horizontal, 160° (+/- 80°) vertical</div><div>Tilt adjustable stand</div><div>Sides: 0.73" (18.6mm)</div><div>15.70" H x 21.59" W x 6.58" D;</div><div>399.0mm H x 548.5mm W x 167.2mm D</div><div>21 watts typical, 26 watts maximum,</div><div><0.5 watts standby/suspend, universal,</div><div>integrated (no external brick-like power supply)</div><div>7.86 lb; 3.55 kg</div><div>3 year (includes backlight)</div><div>January 2014</div></div>		<div>Features</div> <div><div>• Widescreen 23-inch monitor</div><div>• Supports FHD 1920x1080 resolution</div><div>• Supports VESA mount (100mm)</div><div>• Kensington lock slot ready for enhanced security</div><div>• Microsoft® Windows® 7 certified</div><div>• Microsoft Windows 8 / Windows 8.1 certified</div></div>
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<div><div>Preset resolutions</div></div> <div><div>VGA:</div><div>SVGA:</div><div>XGA:</div><div>SXGA:</div><div>WXGA:</div><div>WXGA+:</div><div>WSXGA+:</div><div>Full HD:</div></div> <div><div>640x350, 640x480, 720x400</div><div>800x600, 832x624</div><div>1024x768, 1152x864</div><div>1280x1024</div><div>1366x768</div><div>1440x900, 1600x900</div><div>1680x1050</div><div>1920x1080</div></div>		
<div><div>Presets / user settings</div></div> <div><div>Standard presets: 26</div><div>user settings: 26</div></div>		
<div><div>Viewing adjustments</div><div>Rotating screen</div><div>On screen display</div><div>Control features</div><div>Multiple input</div><div>Monitor connectors</div><div>Signal cables</div><div>Mounting features</div><div>Security</div></div> <div><div>Tilt: 22° backward, -5° forward</div><div>None</div><div>On screen display with digital user controls (8 languages)</div><div>Direct access (buttons on front) for automatic image setup, dual input and brightness</div><div>Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)</div><div>(1) VGA 15-pin D-shell, analog, blue</div><div>(2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant</div><div>(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter</div><div>(2) detachable, DVI-D at each end, digital, 1.8 meter</div><div>Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)</div><div>Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div></div>		
<div><div>Ship group</div></div> <div><div>Monitor with stand, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord</div></div>		
<div><div>Limited Warranty</div><div>See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281</div></div>	<div><div>Accessories</div><div><div><div>Kensington MicroSaver Cable Lock</div><div>73P2582</div></div><div><div>Kensington Twin Head Cable Lock</div><div>45K1620</div></div></div><div><div>See details at www.lenovo.com/support/monitoraccessories</div><div><div>See all monitors at www.lenovo.com/thinkvision</div></div></div></div>	

<p>Name LT1421 Wide Mobile Monitor Case color Raven black Type-model 1452-DS6 (with Protective Screen Cover) Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size 14.0" (355.6mm) diagonal Max view area (W x H) 12.2" x 6.9" (310.8mm x 175.3mm) Optimum resolution 1366x768 Aspect ratio 16:9 Pixel pitch (mm) .227mm Dot/Pixel per Inch 112 dpi Brightness 200 nits or cd/m² (typical) Contrast ratio 400:1 (typical) Pixel response time 8ms (typical) Color gamut 45% Viewing angle at 10:1 CR 90° (+/- 45°) horizontal, 50° (+/- 25°) vertical Stand Tilt adjustable stand Bezel width Sides: 0.476" (12.1mm) Dimensions (HxWxD) 8.58" H x 13.19" W x 0.37-0.85" D; 217.9mm H x 335mm W x 9.3-21.5mm D Power supply 4.2 watts typical, 5 watts maximum, <0.1 watts standby/suspend, universal, USB 2.0 cable (no external brick-like power supply) Weight monitor only: 1.91 lb; 0.87 kg; with Protective Screen Cover: 2.31 lb; 1.05 kg Limited warranty⁴ 3 year (includes backlight) Available date September 2011</p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 14-inch mobile monitor designed for ThinkPad • Light and Slim • Super low power (<5 watts) • Supports 1366x768 resolution • Ergonomic stand tilts, provides a 12° - 40° backward tilt adjustment for comfortable viewing • Detachable USB cable for power and signal • Microsoft® Windows® 7 certified 				
<p>VESA-compliant² VESA DDC2B/CI, VESA DPMS-compliant Power management ENERGY STAR[®] 5.1 Emission standards FCC Class B Environmental WEEE, RoHS Preset resolutions Display mode and resolution auto setup</p>	 <p>ThinkVision LT1421 Wide Mobile Monitor</p>  <p>ThinkVision LT1421 Wide Mobile Monitor with ThinkPad Edge E420s</p>  <p>ThinkVision LT1421 with Protective Screen Cover</p>				
<p>Protective Screen Cover Polycarbonate Snap-On Cover protects the LCD Screen while not in use</p>					
<p>Viewing adjustments Tilt: 12° - 40° backward Screen control Brightness (16 levels) Input USB input Monitor connectors USB 2.0 Signal cables detachable, USB Y-Type cable, 1.8 meter Mounting features None Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</p>					
<p>Ship group Monitor, attached tile stand that cannot be removed, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter USB Y-Type cable, Protective Screen Cover</p>					
<p>Limited Warranty</p> <ul style="list-style-type: none"> ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 	<p>Accessories</p> <table> <tr> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
Kensington MicroSaver Cable Lock	73P2582				
Kensington Twin Head Cable Lock	45K1620				


<p> Name LT1423p Mobile Touch Monitor w/pen Case color Raven black Type-model 60A3UAR2US (with Digitizer pen) Panel TFT-LCD, AH-IPS, White LED backlight Viewable image size 13.3" (337.8mm) diagonal Max view area (W x H) 11.57" x 6.50" (293.8mm x 165.2mm) Optimum resolution 1600x900 Aspect ratio 16:9 Pixel pitch (mm) .184mm Dot/Pixel per Inch 138 dpi Brightness 200 nits or cd/m² (typical) Contrast ratio 500:1 (typical) Pixel response time 35ms (typical) Color gamut 45% Viewing angle at 10:1 CR 150° (+/- 75°) horizontal, 150° (+/- 75°) vertical Stand Build in typing stand Bezel width Sides: 1.04" (26.5mm); top: 1.16" (29.5mm); bottom: 1.16" (29.5mm) Dimensions (HxWxD) 8.87" H x 13.70" W x 0.26-0.50" D; 225.4mm H x 348.0mm W x 6.7-12.7mm D Power supply 6.0 watts typical, 7.0 watts maximum, <1.5 watts standby/suspend, universal, USB 3.0 cable (no external brick-like power supply) Weight 1.87 lb; 0.85 kg Limited warranty⁴ 3 year (includes backlight) Available date September 2013 </p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 13.3-inch mobile Touch monitor • Supports 10-point touch • Supports ThinkPad Digitizer pen • Supports 1600x900 resolution • Detachable USB cable for power and signal • Arsenic/Mercury free • Microsoft® Windows® 7 certified • Microsoft® Windows® 8 certified 				
<p> VESA-compliant² None Power management None Emission standards FCC Class B Environmental RoHS Preset resolutions SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1280x720, 1280x800, 1366x768 WXGA+: 1440x900, 1600x900 Presets / user settings 7 </p>					
<p> Build in typing Stand Yes Touch Screen 10-point touch Digitizer Pen ThinkPad Digitizer pen Input USB input Monitor connectors USB 3.0 Signal cables detachable, USB to mini-USB cable, 100cm detachable, USB Y-Type cable, 45cm Mounting features None Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Protective glass layer Gorilla glass Simple Cover Stand Yes Digital Control key 3 digital control keys Battery None </p>	 <p>ThinkVision LT1423p</p>				
<p>Ship group</p>	<p>Monitor, build in typing stand that cannot be removed, Setup poster, Safety and Warranty Information, 100cm USB to mini-USB cable, 45cm USB Y-Type cable, Simple Cover Stand, ThinkPad Digitizer pen</p>				
<p> Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281 </p>	<p>Accessories</p> <table> <tr> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
Kensington MicroSaver Cable Lock	73P2582				
Kensington Twin Head Cable Lock	45K1620				


<p> Name LT1423p Mobile Touch Monitor w/pen (Wireless) Case color Raven black Type-model 60ACUAR2US (with Digitizer pen) Panel TFT-LCD, AH-IPS, White LED backlight Viewable image size 13.3" (337.8mm) diagonal Max view area (W x H) 11.57" x 6.50" (293.8mm x 165.2mm) Optimum resolution 1600x900 Aspect ratio 16:9 Pixel pitch (mm) .184mm Dot/Pixel per Inch 138 dpi Brightness 200 nits or cd/m² (typical) Contrast ratio 500:1 (typical) Pixel response time 35ms (typical) Color gamut 45% Viewing angle at 10:1 CR 150° (+/- 75°) horizontal, 150° (+/- 75°) vertical Stand Build in typing stand Bezel width Sides: 1.04" (26.5mm); top: 1.16" (29.5mm); bottom: 1.16" (29.5mm) Dimensions (HxWxD) 8.87" H x 13.70" W x 0.50" D; 225.4mm H x 348.0mm W x 12.7mm D Power supply 13.0 watts typical, 16.0 watts maximum, <0.5 watts standby/suspend, universal, USB 3.0 cable (no external brick-like power supply) Weight 2.86 lb; 1.30 kg Limited warranty⁴ 1 year (includes backlight) Available date October 2013 </p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 13.3-inch mobile Touch monitor (Wireless) • 8m wireless range and up to 4 hours battery • Supports 10-point touch • Supports ThinkPad Digitizer pen • Supports 1600x900 resolution • Arsenic/Mercury free • Microsoft® Windows® 7 certified • Microsoft® Windows® 8 certified 				
<p> VESA-compliant² None Power management None Emission standards FCC Class B Environmental RoHS Preset resolutions SVGA: 800x600 XGA: 1024x768 WXGA: 1280x720, 1280x800, 1366x768 WXGA+: 1440x900, 1600x900 Presets / user settings 7 </p>	 <p>ThinkVision LT1423p (Wireless)</p>				
<p> Build in typing Stand Yes Touch Screen 10-point touch Digitizer Pen ThinkPad Digitizer pen Input WiFi 802.11 a/b/g/n and USB input Monitor connectors USB 3.0 Signal cables detachable, USB to mini-USB cable, 100cm detachable, USB Y-Type cable, 45cm Mounting features None Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Protective glass layer Gorilla glass Simple Cover Stand Yes Digital Control key 4 digital control keys Battery 8120 mAh </p>	<p> Ship group Monitor, build in typing stand that cannot be removed, Setup poster, Safety and Warranty Information, 100cm USB to mini-USB cable, 45cm USB Y-Type cable, USB WiFi dongle, Simple Cover Stand, ThinkPad Digitizer pen </p>				
<p> Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281 </p>	<p> Accessories </p> <table> <tr> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> </table> <p> See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision </p>	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
Kensington MicroSaver Cable Lock	73P2582				
Kensington Twin Head Cable Lock	45K1620				


Name	LT1713p Square Flat Panel Monitor	Features <ul style="list-style-type: none">• 17-inch Square LCD monitor• Supports SXGA 1280x1024 resolution• Includes dual input connection for attachment to two systems concurrently (analog and digital)• Arsenic free glass• Supports Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket• Microsoft® Windows® 7 certified• Microsoft Windows 8 certified• Microsoft Windows 8.1 certified						
Case color	Business black							
Type-model	60B3HAR2US							
Panel	TFT-LCD, twisted nematic (TN), LED backlight							
Viewable image size	17.0" (432mm) diagonal							
Max view area (W x H)	13.3" x 10.6" (337.9mm x 270.3mm)							
Optimum resolution	1280x1024							
Aspect ratio	5:4							
Pixel pitch (mm)	0.264mm							
Dot/Pixel per Inch	96 dpi							
Brightness	250 nits or cd/m² (typical)							
Contrast ratio	1000:1 (typical)							
Pixel response time	5ms (typical)							
Color gamut	72%							
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical							
Stand	Tilt height adjustable stand							
Bezel width	Sides: 0.60" (15.3mm); top: 0.73" (18.4mm); bottom: 1.10" (28.1mm)							
Dimensions	16.0" H x 14.6" W x 6.5" D;							
(HxWxD, including stand)	405.7mm H x 370.0mm W x 165.2mm D							
Power supply	13.0 watts typical, 16.0 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)							
Weight	7.90 lb; 3.60kg							
Limited warranty ⁴	3 year (includes backlight)							
Available date	January 2014							
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant							
Power management	ENERGY STAR® 6.0							
Ergonomics	ISO 9241-307							
Emission standards	FCC Class B							
Environmental	TCO Displays 6.0, TCO Certified Edge 1.2, WEEE, RoHS, EPEAT™ Gold rating							
Preset resolutions	VGA: 640x350, 640x480, 640x500, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864, SXGA: 1280x1024							
Presets / user settings	Standard presets: 17; user settings: 22							
Viewing adjustments	Tilt: 22° back, -3° forward; lift: 4.3" (110mm)							
Rotating screen	None							
On screen display	On screen display with digital user controls (8 languages)							
Control features	Direct access (buttons on front) for automatic image setup							
Multiple input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)							
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant							
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter							
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)							
Security	Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)							
Ship group	Monitor and stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter digital signal cable, 1.8 meter black power cord							
Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281		Accessories <table><tr><td>Kensington MicroSaver Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr><tr><td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr></table> See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Easy Reach Monitor Stand	55Y9258
Kensington MicroSaver Cable Lock	73P2582							
Kensington Twin Head Cable Lock	45K1620							
Lenovo Easy Reach Monitor Stand	55Y9258							


Name	LT1913p Square Flat Panel Monitor	Features <ul style="list-style-type: none">• 19-inch Square IPS LED backlit panel• Supports 1280x1024 resolution• Support Lenovo Tiny PC via optional Lenovo bracket• Mercury and arsenic free glass• Low Halogen• Recycled content in plastic material• Microsoft® Windows® 7 certified• Microsoft Windows 8 certified								
Case color	Business black									
Type-model	60AAHAR1US									
Panel	TFT-LCD, In-Plane Switching (IPS), White LED backlight									
Viewable image size	19" (480.0mm) diagonal									
Max view area (W x H)	14.76" x 11.80" (374.8mm x 299.8mm)									
Optimum resolution	1280x1024									
Max pixel rate	205MHz (VGA), 165MHz (DVI)									
Aspect ratio	5:4									
Pixel pitch (mm)	0.0976 (H) x 0.2928 (V) mm									
Dot/Pixel per Inch	86.8 dpi									
Brightness	250 nits or cd/m² (typical)									
Contrast ratio	1000:1 (typical)									
Pixel response time	7ms (typical)									
Color gamut	72%									
Viewing angle at 10:1 CR	178° horizontal, 178° vertical									
Stand	Tilt, swivel, pivot, and height adjustable stand									
Bezel width	Sides: 0.69" (17.4mm); top: 0.69" (17.4mm); bottom: 0.69" (17.4mm)									
Dimensions (HxWxD)	14.89" H x 16.18" W x 8.74" D; 378.3mm H x 411.0mm W x 221.9mm D									
Power supply	24 watts typical, 27 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)									
Weight	10.03 lb; 4.55kg									
Limited warranty ⁴	3 year (includes backlight)									
Available date	August 2013									
VESA-compliant ²	VESA DDC2B/CI, EDID 1.3									
Power management	ENERGY STAR® 6.0									
Ergonomics	ISO 9241-307									
Emission standards	FCC Class B									
Environmental	TCO Displays 6.0, TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating, ULE Gold									
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 823x624 XGA: 1024x768, 1152x864, 1152x900 SXGA: 1280x1024									
Presets / user settings	Standard presets: 20; user settings: 20									
Viewing adjustments	Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/- 45°									
Rotating screen	Screen pivots 90 degrees from landscape to portrait									
On screen display	On screen display with digital user controls (8 languages)									
Control features	Direct access (buttons on front) for automatic image setup, input switch, and brightness									
Multiple input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)									
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant									
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter									
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)									
Security	Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)									
Ship group	Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord									
Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281		Accessories <table><tr><td>Kensington MicroSaver Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr><tr><td>Lenovo Security Cable Lock</td><td>57Y4303</td></tr><tr><td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr></table> See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	Lenovo Easy Reach Monitor Stand	55Y9258
Kensington MicroSaver Cable Lock	73P2582									
Kensington Twin Head Cable Lock	45K1620									
Lenovo Security Cable Lock	57Y4303									
Lenovo Easy Reach Monitor Stand	55Y9258									


<div>NameLT1952p Wide Flat Panel Monitor</div> <div>Case colorBusiness black</div> <div>Type-model2448-MB6</div> <div>PanelTFT-LCD, twisted nematic (TN), White LED backlight</div> <div>Viewable image size19" (482.6mm) diagonal</div> <div>Max view area (W x H)16.07" x 10.05" (408.2mm x 255.2mm)</div> <div>Optimum resolution1440x900</div> <div>Max pixel rate137MHz</div> <div>Aspect ratio16:10</div> <div>Pixel pitch (mm)0.2835mm</div> <div>Dot/Pixel per Inch89.4 dpi</div> <div>Brightness250 nits or cd/m² (typical)</div> <div>Contrast ratio1000:1 (typical)</div> <div>Pixel response time5ms (typical)</div> <div>Color gamut72%</div> <div>Anti-reflectiveAnti-reflective, anti-glare</div> <div>Viewing angle at 10:1 CR170° horizontal, 160° vertical</div> <div>StandTilt, swivel, and height adjustable stand</div> <div>Bezel widthSides: 0.61" (15.6mm); top: 0.67" (17.1mm); bottom: 1.2" (30.5mm)</div> <div>Dimensions (HxWxD)15.66-19.99" H x 17.36" W x 6.74" D; 397.7-507.7mm H x 440.9mm W x 171.3mm D</div> <div>Power supply13 watts typical, 17 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)</div> <div>Weight9.49 lb; 4.30kg</div> <div>Limited warranty⁴3 year (includes backlight)</div> <div>Available dateSeptember 2011</div> <div>VESA-compliant²VESA DDC2B/CI</div> <div>Power managementENERGY STAR® 5.1</div> <div>ErgonomicsISO 9241-307</div> <div>Emission standardsMPR-2, FCC Class B</div> <div>EnvironmentalTCO Displays 5.2, TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating, ULE Gold</div> <div>Preset resolutionsVGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1366x768 WXGA+: 1440x900</div> <div>Presets / user settingsStandard presets: 22; user settings: 22</div> <div>Viewing adjustmentsTilt: 20° back, -3° forward; lift: 4.3" (110mm); swivel: +/-180°; detachable stand</div> <div>Rotating screenNone</div> <div>On screen displayOn screen display with digital user controls (8 languages)</div> <div>Control featuresDirect access (buttons on front) for automatic image setup, input switch, and brightness</div> <div>Multiple inputTriple input (three different PCs attach to three different connectors; one PC shows image; select via button)</div> <div>Monitor connectors(1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant</div> <div>Signal cables(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Note: DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537)</div> <div>Mounting featuresWall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)</div> <div>SecuritySecurity keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div> <div>Ship groupMonitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord</div>		<div>Features<ul style="list-style-type: none">• Widescreen 19-inch monitor• Supports 1440x900 resolution• Ergonomic stand tilts, swivel, and provides a 4.3" (110mm) range height adjustment for comfortable viewing• Cable Management for better user experience• Mercury and arsenic free glass• Recycled content in plastic material• Privacy Filter Slot• Microsoft® Windows® 7 certified</div> <div></div> <div>ThinkVision LT1952p Wide Monitor</div>											
<div>Limited Warranty<ul style="list-style-type: none">⇒ 3 year limited warranty⁴⇒ International Warranty Service⁵⇒ Replacement normally arrives in two business days, excluding holidays⇒ Lenovo pays all shipping costs for valid warranty claims⁶⇒ Service upgrade options:⁷<ul style="list-style-type: none">• 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209)• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)• 4 year, mail exchange (51J0589)• 5 year, mail exchange (51J0590)⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>	<div>Accessories<table><tr><td>DisplayPort to DisplayPort Monitor Cable</td><td>0A36537</td></tr><tr><td>Kensington MicroSaver Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr><tr><td>Lenovo Security Cable Lock</td><td>57Y4303</td></tr><tr><td>ThinkCentre Extend Arm</td><td>57Y4352</td></tr><tr><td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr></table></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>	DisplayPort to DisplayPort Monitor Cable	0A36537	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	ThinkCentre Extend Arm	57Y4352	Lenovo Easy Reach Monitor Stand	55Y9258
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Lenovo Easy Reach Monitor Stand	55Y9258												

<div>Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Max pixel rate Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD, excluding stand) Dimensions (HxWxD, including stand) Power supply Weight Limited warranty⁴ Available date</div> <div>LT1953 Wide Flat Panel Monitor Business black 1453-HB1 (Latin America) TFT-LCD, twisted nematic (TN), White LED backlight 19" (482.6mm) diagonal 16.07" x 10.05" (408.2mm x 255.2mm) 1440x900 205MHz(VGA), 165MHz(DVI) 16:10 0.2835mm 89.4 dpi 250 nits or cd/m² (typical) 1000:1 (typical) 5ms (typical) 72% 170° horizontal, 160° vertical Tilt stand Sides: 0.66" (16.8mm); top: 0.66" (16.8mm); bottom: 0.66" (16.8mm) 11.42" H x 17.45" W x 1.99" D; 290.2mm H x 443.2mm W x 50.5mm D 13.94" H x 17.45" W x 6.33" D; 354.0mm H x 443.2mm W x 160.7mm D 17 watts typical, 20 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 6.61 lb; 3.00kg 3 year (includes backlight) March 2013</div>		<div>Features</div> <div><ul style="list-style-type: none">• Widescreen 19-inch monitor• Supports 1440x900 resolution• VGA and DVI connections• Arsenic free glass• Support Lenovo Tiny PC via VESA mount• 85% PCC plastic resins• Microsoft® Windows® 7 certified• Microsoft Windows 8 certified</div>
<div>VESA-compliant² Power management Ergonomics Emission standards Environmental Preset resolutions Presets / user settings</div> <div>VESA DDC2B/CI ENERGY STAR® 6.0 ISO 9241-307 MPR-2, FCC Class B TCO Displays 6.0, TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating, ULE Gold VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA+: 1440x900 Standard presets: 20; user settings: 20</div>	<div><div>ThinkVision LT1953 Wide Monitor</div></div>	
<div>Viewing adjustments Rotating screen On screen display Control features Multiple input Monitor connectors Signal cables Mounting features Security</div> <div>Tilt: 22° back, -5° forward None On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup, input switch, and brightness Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>	<div>Ship group</div> <div>Monitor, tilt stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord</div>	
<div>Limited Warranty</div> <div><div>⇒ 3 year limited warranty⁴</div><div>⇒ International Warranty Service⁵</div><div>⇒ Replacement normally arrives in two business days, excluding holidays</div><div>⇒ Lenovo pays all shipping costs for valid warranty claims⁶</div><div>⇒ Service upgrade options:⁷<div><div>• 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209)</div><div>• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)</div><div>• 4 year, mail exchange (51J0589)</div><div>• 5 year, mail exchange (51J0590)</div></div></div><div>⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div></div>	<div>Accessories</div> <div><div><div>Kensington MicroSaver Cable Lock</div><div>73P2582</div></div><div><div>Kensington Twin Head Cable Lock</div><div>45K1620</div></div><div><div>Lenovo Security Cable Lock</div><div>57Y4303</div></div></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>	


Name	LT2013p Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 19.5-inch monitor• HD support, HDCP-compliant• Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing• Compliance with ENERGY STAR 6.0• Support Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket• Arsenic/Lead/Mercury free• EPEAT Gold certified• Microsoft® Windows® 7 certified• Microsoft Windows 8 certified										
Case color	Business black											
Type-model	60A0MAR1US	 ThinkVision LT2013p Wide Monitor										
Panel	TFT-LCD, twisted nematic (TN), White LED backlight											
Viewable image size	19.5" (494mm) diagonal											
Max view area (W x H)	17.05" x 9.44" / 433.0mm x 239.8mm											
Optimum resolution	1600x900											
Aspect ratio	16:9											
Pixel pitch (mm)	.27mm											
Dot/Pixel per Inch	94 dpi											
Brightness	250 nits or cd/m² (typical)											
Contrast ratio	1000:1 (typical)											
Pixel response time	5ms (typical)											
Color gamut	72%											
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical											
Stand	Tilt, swivel, pivot, and height adjustable stand (toolless detachable)											
Bezel width	<i>Sides:</i> 0.66" (16.8mm); <i>top:</i> 0.66" (16.8mm); <i>bottom:</i> 0.66" (16.8mm)											
Dimensions	10.82" H x 18.39" W x 2.07" D;											
(HxWxD, excluding stand)	274.8mm H x 467.0mm W x 52.8mm D											
Dimensions	13.25" H x 18.39" W x 7.87" D;											
(HxWxD, including stand)	336.5mm H x 467.0mm W x 200.0mm D											
Power supply	17 watts typical, 36 watts maximum, <1.0 watts sleep/off (w/o USB hub); <0.5 watts switch off (w/o USB hub) integrated (no external brick-like power supply)											
Weight	9.70 lb; 4.40kg (excluding stand)											
Limited warranty ⁴	3 year (includes backlight)											
Available date	March 2013											
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant											
Power management	ENERGY STAR [®] 6.0											
Ergonomics	ISO 9241-307											
Emission standards	MPR-2, FCC Class B											
Environmental	TCO Displays 6.0, TCO Certified Edge 1.1, RoHS, EPEAT™ Gold rating											
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900 WSXGA+: 1600x900											
Presets / user settings	Presets: 24; user settings: 24											
Viewing adjustments	<i>Tilt:</i> 30° back, -5° forward; <i>lift:</i> 4.3" (110mm); <i>swivel:</i> +/-45°; detachable stand											
Rotating screen	Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller, do not support image rotation under dual image modes)											
On screen display	On screen display with digital user controls (8 languages)											
Control features	Direct access (buttons on front) for automatic image setup, input switch, and brightness											
USB hub	USB 2.0 Hub (1 port into PC, 4 ports for accessories)											
Multiple input	Triple input (three different PCs attach to three different connectors; one PC shows image; select via button)											
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) HDMI (1.4), digital, HDCP-compliant											
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter											
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI [®] (100mm mount)											
Security	Security keyhole for attachment of optional cable lock (Kensington [®] lock-compatible)											
Ship group	Monitor, toolless detachable stand, Quick start and safety poster, CD with multilingual User's Guide, setup test pattern, and monitor installation files, analog signal cable, 1.8 meter USB cable, 1.8 meter black power cord											
Limited Warranty <ul style="list-style-type: none">⇒ 3 year limited warranty⁴⇒ International Warranty Service⁵⇒ Replacement normally arrives in two business days, excluding holidays⇒ Lenovo pays all shipping costs for valid warranty claims⁶⇒ Service upgrade options⁷:<ul style="list-style-type: none">• 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209)• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)• 4 year, mail exchange (51J0589)• 5 year, mail exchange (51J0590)⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		Accessories <table><tr><td>Kensington MicroSaver Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr><tr><td>Lenovo Security Cable Lock</td><td>57Y4303</td></tr><tr><td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr><tr><td>ThinkCentre Extend Arm</td><td>57Y4352</td></tr></table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	Lenovo Easy Reach Monitor Stand	55Y9258	ThinkCentre Extend Arm	57Y4352
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<div>Name</div> <div>Case color</div> <div>Type-model</div> <div>Panel</div> <div>Viewable image size</div> <div>Max view area (W x H)</div> <div>Optimum resolution</div> <div>Aspect ratio</div> <div>Pixel pitch (mm)</div> <div>Dot/Pixel per Inch</div> <div>Brightness</div> <div>Contrast ratio</div> <div>Pixel response time</div> <div>Color gamut</div> <div>Viewing angle at 10:1 CR</div> <div>Stand</div> <div>Bezel width</div> <div>Dimensions (HxWxD, excluding stand)</div> <div>Dimensions (HxWxD, including stand)</div> <div>Power supply</div> <div>Weight</div> <div>Limited warranty⁴</div> <div>Available date</div>	<div>LT2013s Wide Flat Panel Monitor</div> <div>Business black</div> <div>60ABAAR1US</div> <div>TFT-LCD, twisted nematic (TN), White LED backlight</div> <div>19.5" (494mm) diagonal</div> <div>17.08" x 9.30" / 433.9mm x 236.3mm</div> <div>1600x900</div> <div>16:9</div> <div>.27 (H) x .26 (V) mm</div> <div>281/94 dpi</div> <div>200 nits or cd/m² (typical)</div> <div>600:1 (typical)</div> <div>5ms (typical)</div> <div>72%</div> <div>90° (+/- 45°) horizontal, 50° (+ 15/- 35°) vertical</div> <div>Tilt stand</div> <div>Sides: 0.62" (15.85mm);</div> <div>top: 0.73" (18.55mm);</div> <div>bottom: 0.73" (18.55mm)</div> <div>10.83" H x 18.41" W x 2.09" D;</div> <div>274.8mm H x 467.0mm W x 53.0mm D</div> <div>13.50" H x 18.41" W x 6.33" D;</div> <div>342.4mm H x 467.0mm W x 160.7mm D</div> <div>17 watts typical, 19 watts maximum, <0.5 watts sleep/off; <0.5 watts switch off integrated (no external brick-like power supply)</div> <div>5.50 lb; 2.50kg (excluding stand)</div> <div>3 year (includes backlight)</div> <div>July 2013</div>
<div>VESA-compliant²</div> <div>Power management</div> <div>Ergonomics</div> <div>Emission standards</div> <div>Environmental</div> <div>Preset resolutions</div> <div>Presets / user settings</div>	<div>VESA DDC2B/CI, EDID 1.3</div> <div>ENERGY STAR[®] 6.0</div> <div>ISO 9241-307</div> <div>FCC Class B</div> <div>RoHS, EPEAT™ Silver rating</div> <div>VGA: 640x350, 640x480, 720x400</div> <div>SVGA: 800x600, 832x624</div> <div>XGA: 1024x768, 1152x864</div> <div>SXGA: 1280x1024</div> <div>WXGA: 1366x768</div> <div>WXGA+: 1440x900</div> <div>WSXGA+: 1600x900</div> <div>Presets: 24; user settings: 24</div>
<div>Viewing adjustments</div> <div>Rotating screen</div> <div>On screen display</div> <div>Control features</div> <div>USB hub</div> <div>Multiple input</div> <div>Monitor connectors</div> <div>Signal cables</div> <div>Mounting features</div> <div>Security</div>	<div>Tilt: 22° back, -5° forward</div> <div>None</div> <div>On screen display with digital user controls (8 languages)</div> <div>Direct access (buttons on front) for automatic image setup, input switch, and brightness</div> <div>None</div> <div>VGA input</div> <div>(1) VGA 15-pin D-shell, analog, blue</div> <div>(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter</div> <div>Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI[®] (100mm mount)</div> <div>Security keyhole for attachment of optional cable lock (Kensington[®] lock-compatible)</div>
<div>Ship group</div>	<div>Monitor, stand and base, Quick start and safety poster, CD with multilingual User's Guide, setup test pattern, and monitor installation files, analog signal cable, 1.8 meter black power cord</div>
<div>Limited Warranty</div> <div>See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281</div>	<div>Features</div> <div>• Widescreen 19.5-inch monitor</div> <div>• Compliance with ENERGY STAR 6.0</div> <div>• Support Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket</div> <div>• EPEAT Silver certified</div> <div>• Microsoft[®] Windows[®] 7 certified</div> <div>• Microsoft Windows 8 certified</div> <div></div> <div>ThinkVision LT2013s Wide Monitor</div> <div>Accessories</div> <div><div>Kensington MicroSaver Cable Lock</div><div>73P2582</div></div> <div><div>Kensington Twin Head Cable Lock</div><div>45K1620</div></div> <div><div>Lenovo Security Cable Lock</div><div>57Y4303</div></div> <div><div>Lenovo Easy Reach Monitor Stand</div><div>55Y9258</div></div> <div><div>ThinkCentre Extend Arm</div><div>57Y4352</div></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>



<div>Name Case color Type-model Panel Viewable image size Max view area (W x H) Native resolution Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date</div>		<div>LT2024 Wide Flat Panel Monitor Business black 60B9HAR1US TFT-LCD, twisted nematic (TN), White LED backlight 20.0" (508mm) diagonal 17.4" x 9.8" (442.8mm x 249.1mm) 1600x900 16:9 .276mm 92 dpi 250 nits or cd/m² (typical) 1000:1 (typical) 5ms (typical) 72% 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt adjustable stand Sides: 0.567" (14.4mm) 13.68" H x 18.83" W x 6.33" D; 347.4mm H x 478.4mm W x 160.7mm D 19 watts typical, 22 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 6.75 lb; 3.07 kg 3 year (includes backlight) March 2014</div>	<div>Features</div> <ul style="list-style-type: none">• Widescreen 20-inch monitor• Supports 1600x900 resolution• Includes dual input connection for attachment to two systems concurrently (analog and digital)• Arsenic / Mercury free glass• EPEAT Gold certified• Support Lenovo Tiny PC and 3rd party thin client• Microsoft® Windows® 7 certified• Microsoft Windows 8 / Windows 8.1 certified
<div>VESA-compliant² Power management Ergonomics Emission standards Environmental</div>		<div>VESA DDC2B/CI ENERGY STAR® qualified ISO 9241-307 FCC Class B TCO Displays 6.0, TCO Certified Edge 1.2, WEEE, RoHS, EPEAT™ Gold rating</div>	<div> ThinkVision LT2024 Wide Monitor</div>
<div>Preset resolutions</div>		<div>VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900</div>	
<div>Presets / user settings</div>		<div>Standard presets: 24 user settings: 24</div>	
<div>Viewing adjustments Rotating screen On screen display Control features Multiple input Monitor connectors Signal cables Mounting features Security</div>		<div>Tilt: 22° backward, -5° forward None On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup, dual input and brightness Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>	
<div>Ship group</div>		<div>Monitor with stand, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter black power cord</div>	
<div>Limited Warranty</div> <div>See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281</div>		<div>Accessories</div> <div><div>Kensington MicroSaver Cable Lock73P2582</div><div>Kensington Twin Head Cable Lock45K1620</div></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>	

<p>Name ThinkVision LT2223p 21.5-inch FHD LED Backlit LCD Monitor Case color Business black Type-model 60A1MAR2US Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size 21.5" (546mm) diagonal Max view area (W x H) 18.74" x 10.54" / 476.1mm x 267.8mm Optimum resolution 1920x1080 Aspect ratio 16:9 Pixel pitch (mm) 0.248mm Dot/Pixel per Inch 103 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Dynamic Contrast ratio 2000000:1 Pixel response time 5ms (typical) Color gamut 72% Viewing angle at 10:1 CR 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Stand Tilt, swivel, pivot, and height adjustable stand (toolless detachable) Bezel width <i>Sides:</i> 0.68" (17.3mm); <i>top:</i> 0.68" (17.3mm); <i>bottom:</i> 0.68" (17.3mm) Dimensions (HxWxD, excluding stand) 304.1mm H x 512.6mm W x 56.4mm D Dimensions (HxWxD, including stand) 362.9mm H x 512.6mm W x 218.4mm D Power supply 23 watts typical, 27 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) Weight (including stand) 10.94 lb; 4.96kg Weight (Head only) 6.77 lb; 3.07kg Limited warranty⁴ 3 year (includes backlight) Available date March 2013</p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 21.5-inch monitor • 1080p full HD support • Integrated USB Hub (4 USB 2.0) • Supports VGA, DisplayPort 1.2 and HDMI 1.4 interfaces (HDCP-compliant) • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Compliance with ENERGY STAR 6.0 • Support Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket • Arsenic/Lead/Mercury free • EPEAT Gold certified • Microsoft® Windows® 7 certified • Microsoft Windows 8 certified 										
<p>VESA-compliant² VESA DDC2B/CI, VESA DPMS-compliant Power management ENERGY STAR[®] 6.0 Ergonomics ISO 9241-307 Emission standards MPR-2, FCC Class B Environmental TCO Displays 6.0, TCO Certified Edge 1.1, RoHS, EPEAT™ Gold rating</p> <p>Preset resolutions VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900 WSXGA+: 1600x900, 1680x1050 Full HD: 1920x1080</p> <p>Presets / user settings Presets: 27; user settings: 20</p>	 <p>ThinkVision LT2223p Wide Monitor</p>										
<p>Viewing adjustments <i>Tilt:</i> 30° back, -5° forward; <i>lift:</i> 4.3" (110mm); <i>swivel:</i> +/-45°; detachable stand Rotating screen Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller, do not support image rotation under dual image modes) On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup, input switch, and brightness USB hub USB 2.0 Hub: 1 port into PC (USB 2.0); 4 ports for accessories (4 USB 2.0) Multiple input Triple input (three different PCs attach to three different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort (1.2), digital, black, HDCP-compliant (3) HDMI (1.4), digital, HDCP-compliant Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI[®] (100mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</p>	<p>Ship group Monitor, toolless detachable stand, Quick start and safety poster, CD with multilingual User's Guide, setup test pattern, and monitor installation files, analog signal cable, 1.8 meter USB cable, 1.8 meter black power cord</p>										
<p>Limited Warranty</p> <ul style="list-style-type: none"> ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 	<p>Accessories</p> <table> <tr> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>Lenovo Security Cable Lock</td> <td>57Y4303</td> </tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td> <td>55Y9258</td> </tr> <tr> <td>ThinkCentre Extend Arm</td> <td>57Y4352</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	Lenovo Easy Reach Monitor Stand	55Y9258	ThinkCentre Extend Arm	57Y4352
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ThinkCentre Extend Arm	57Y4352										

Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Dynamic Contrast ratio Pixel response time Color gamut Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD, excluding stand) Dimensions (HxWxD, including stand) Power supply Weight (including stand) Weight (Head only) Limited warranty⁴ Available date		ThinkVision LT2223z 21.5-inch FHD LED Backlit LCD VoIP Monitor Business black 60A2MAR2US TFT-LCD, twisted nematic (TN), White LED backlight 21.5" (546mm) diagonal 18.74" x 10.54" / 476.1mm x 267.8mm 1920x1080 16:9 0.248mm 103 dpi 250 nits or cd/m ² (typical) 1000:1 (typical) 2000000:1 5ms (typical) 72% 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt, swivel, pivot, and height adjustable stand (toolless detachable) <i>Sides:</i> 0.68" (17.3mm); <i>top:</i> 1.33" (33.8mm); <i>bottom:</i> 1.88" (47.8mm) 13.82" H x 20.18" W x 2.12" D; 351.1mm H x 512.6mm W x 56.4mm D 14.94" H x 20.18" W x 8.60" D; 379.4mm H x 512.6mm W x 218.4mm D 24 watts typical, 28 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 11.98 lb; 5.43kg 7.79 lb; 3.53kg 3 year (includes backlight) April 2013	Features <ul style="list-style-type: none">• Widescreen 21.5-inch monitor• 1080p full HD support• Integrated camera (FHD), speakers & dual digital microphone• Integrated USB 3.0 Hub (2 USB 3.0)• Supports VGA, DisplayPort 1.2 and HDMI 1.4 interfaces (HDCP-compliant)• Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing• Compliance with ENERGY STAR 6.0• Support Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket• Arsenic/Lead/Mercury free• EPEAT Gold certified• Microsoft® Windows® 7 certified• Microsoft Windows 8 certified																																	
VESA-compliant² Power management Ergonomics Emission standards Environmental Preset resolutions Presets / user settings	VESA DDC2B/CI, VESA DPMS-compliant ENERGY STAR® ³ 6.0 ISO 9241-307 MPR-2, FCC Class B TCO Displays 6.0, TCO Certified Edge 1.1, RoHS, EPEAT™ Gold rating VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900 WSXGA+: 1600x900, 1600x1050 Full HD: 1920x1080 Presets: 25; user settings: 20	 ThinkVision LT2223z Wide Monitor																																		
Viewing adjustments Rotating screen On screen display Control features USB hub Multimedia Camera Multiple input Monitor connectors Signal cables Mounting features Security Ship group	<i>Tilt:</i> 30° back, -5° forward; <i>lift:</i> 4.3" (110mm); <i>swivel:</i> +/-45°; detachable stand Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller, do not support image rotation under dual image modes) On screen display with digital user controls (8 languages) Direct access (buttons on front) for MIC mute, speaker mute and hook switch buttons USB 3.0 Hub: 1 port into PC (USB 3.0); 2 ports for accessories (2 USB 3.0) Integrated digital speakers (3 watts x 2) Integrated camera (FHD) and digital dual microphone array, with Camera lock button for security Triple input (three different PCs attach to three different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort (1.2), digital, black, HDCP-compliant (3) HDMI (1.4), digital, HDCP-compliant (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)																																			
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<p>Name LT2252p Wide Flat Panel Monitor Case color Business black Type-model 2572-MB6 / 2572-MB1 Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size 22" (559mm) diagonal Max view area (W x H) 18.7" x 11.7" (473.8mm x 296.1mm) Optimum resolution 1680x1050 Max pixel rate 205MHz Aspect ratio 16:10 Pixel pitch (mm) 0.282mm Dot/Pixel per Inch 90 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical) Color gamut 72% Anti-reflective Anti-reflective, anti-glare Viewing angle at 10:1 CR 170° horizontal, 160° vertical Stand Tilt, swivel, pivot, and height adjustable stand Bezel width <i>Sides: 0.60" (15.3mm); top: 0.79" (20.0mm); bottom: 1.10" (28.0mm)</i></p> <p>Dimensions (HxWxD) 14.46-18.79" H x 19.92" W x 9.50" D; 367.3-477.3mm H x 506mm W x 241.2mm D</p> <p>Power supply 20 watts typical, 26 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 12.97lb; 5.89kg</p> <p>Weight Limited warranty⁴ 3 year (includes backlight) Available date September 2011 / December 2012</p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 22-inch monitor • Supports 1680x1050 resolution • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Cable Management for better user experience • Mercury and arsenic free glass • Recycled content in plastic material • Privacy Filter Slot • Microsoft® Windows® 7 certified • Model 2572-MB1 supports Lenovo Tiny PC via optional Lenovo bracket 												
<p>VESA-compliant² VESA DDC2B/CI Power management ENERGY STAR® 5.1 (2572-MB6) ENERGY STAR® 6.0 (2572-MB1) Ergonomics ISO 9241-307 Emission standards MPR-2, FCC Class B Environmental TCO Displays 5.2, TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating, ULE Gold</p> <p>Preset resolutions VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1280x800, 1366x768 WXGA+: 1440x900 1600x900 WSXGA+: 1680x1050</p> <p>Presets / user settings Standard presets: <i>VGA/DisplayPort: 26; DVI-D: 25;</i> user settings: 25</p>	 <p>ThinkVision LT2252p Wide Monitor</p>												
<p>Viewing adjustments <i>Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand</i> Rotating screen Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller) On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup, input switch, and brightness USB hub None Camera None Multiple input Triple input (three different PCs attach to three different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D) for digital attach [white], HDCP-compliant</p> <p>Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Note: DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537) Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)</p> <p>Mounting features Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</p> <p>Ship group Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord</p>													
<p>Limited Warranty</p> <p>⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷</p> <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) <p>⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</p>	<p>Accessories</p> <table> <tr> <td>DisplayPort to DisplayPort Monitor Cable</td> <td>0A36537</td> </tr> <tr> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>Lenovo Security Cable Lock</td> <td>57Y4303</td> </tr> <tr> <td>ThinkCentre Extend Arm</td> <td>57Y4352</td> </tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td> <td>55Y9258</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	DisplayPort to DisplayPort Monitor Cable	0A36537	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	ThinkCentre Extend Arm	57Y4352	Lenovo Easy Reach Monitor Stand	55Y9258
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See footnotes for important warranty information
 US model announced September 13, 2011 or December 18, 2012
 US model 2572-MB6 withdrawn effective October 31, 2013

<div>Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Anti-reflective Vertical frequency Horizontal frequency Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date</div>		<div>LT2323p Wide Flat Panel Monitor Raven black 3024-HC1 TFT-LCD, twisted nematic (TN), White LED backlight 23.0" (584mm) diagonal 18.65" x 11.66" / 473.8mm x 296.1mm 1920x1080 16:9 .265mm 96 dpi 250 nits or cd/m² (typical) 1000:1 (typical) 5ms (typical) 72% Anti-reflective, anti-glare 50 to 75Hz 30 to 83kHz 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt, swivel, pivot, and height adjustable stand (toolless detachable) Sides: 0.68" (17.2mm); top: 0.70" (17.7mm); bottom: 0.94" (24.0mm) 14.66" H x 21.49" W x 2.06" D; (excluding stand) 372.3mm H x 546.0mm W x 52.3mm D 20 watts typical, 38 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 12.65 lb; 5.74kg (excluding stand) 3 year (includes backlight) May 2012</div>	<div>Features • Widescreen 23-inch monitor • 1080p full HD support, HDCP-compliant • Built-in VGA, DVI and DisplayPort connectors for attachment to three systems concurrently • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Compliance with ENERGY STAR 6.0 DRAFT • Microsoft® Windows® 7 certified</div>
<div>VESA-compliant² Power management Ergonomics Emission standards Environmental</div>		<div>VESA DDC2B/CI, VESA DPMS-compliant ENERGY STAR® 6.0 DRAFT ISO 9241-307 MPR-2, FCC Class B TCO (TCO Certified Edge 1.1), WEEE, RoHS, EPEAT™ Gold rating</div>	<div>  ThinkVision LT2323p Wide Monitor</div>
<div>Preset resolutions</div>		<div>VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1360x768 WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080</div>	
<div>Presets / user settings</div>		<div>Presets: 26; user settings: 25</div>	
<div>Viewing adjustments Rotating screen On screen display Control features USB hub Multiple input Monitor connectors</div>		<div>Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller, do not support image rotation under dual image modes) On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup, input switch, and brightness USB 2.0 Hub (1 port into PC, 4 ports for accessories) Triple input (three different PCs attach to three different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Note: DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537) Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>	
<div>Signal cables</div>			
<div>Mounting features Security</div>			
<div>Ship group</div>		<div>Monitor, toolless detachable stand, Quick start and safety poster, CD with multilingual User's Guide, setup test pattern, and monitor installation files, analog signal cable, DVI-D cable, 1.8 meter USB cable, 1.8 meter black power cord</div>	
<div>Limited Warranty ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷ • 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>		<div>Accessories I I M I B Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620 Lenovo Security Cable Lock 57Y4303 Lenovo Easy Reach Monitor Stand 55Y9258 ThinkCentre Extend Arm 57Y4352 See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision</div>	

A black Lenovo ThinkCentre monitor with a wide bezel. The screen is dark. The 'ThinkCentre' logo is visible in the top left corner of the bezel. The 'lenovo' logo is centered on the bottom bezel. On the right side of the bottom bezel, there are several small, faint icons. The monitor is mounted on a black, curved stand.


ThinkVision LT2323z Wide Monitor

<p> Name LT2423 Wide Flat Panel Monitor Case color Business black Type-model 60A8KAR2US Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size 24" (610mm) diagonal Max view area (W x H) 20.9" x 11.8" (531.4mm x 298.9mm) Optimum resolution 1920x1080 Max pixel rate 205MHz Aspect ratio 16:9 Pixel pitch (mm) 0.278mm Dot/Pixel per Inch 92 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Contrast ratio 2000000:1 Pixel response time 5ms Color gamut 72% Viewing angle at 10:1 CR 170° horizontal, 160° vertical Stand Tilt stand Bezel width Sides: 0.67" (17.0mm); top: 0.67" (17.0mm); bottom: 1.02" (26.0mm) Dimensions 13.53" H x 22.33" W x 1.97" D; (HxWxD, excluding stand) 343.7mm H x 567.1mm W x 50.0mm D Dimensions 16.30" H x 22.33" W x 8.50" D; (HxWxD, including stand) 414.3mm H x 567.1mm W x 216.7mm D Power supply 21 watts typical, 31 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) Weight 8.30 lb; 3.76kg Limited warranty⁴ 3 year (includes backlight) Available date July 2013 </p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 24-inch monitor • Supports 1920x1080 resolution • Two 3W stereo speakers • Audio in (3.5mm) • Supports VGA and HDMI 1.4 interfaces • Support Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket • Microsoft® Windows® 8 certified • Arsenic/Lead/Mercury free 										
<p> VESA-compliant² VESA DDC2B/CI Power management ENERGY STAR® 6.0 Ergonomics ISO 9241-307 Emission standards MPR-2, FCC Class B Environmental TCO Displays 6.0, TCO Certified Edge 1.2, WEEE, RoHS, EPEAT™ Gold rating, ULE Gold </p>	 <p>ThinkVision LT2423 Wide Monitor</p>										
<p> Preset resolutions VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 Full HD: 1920x1080 </p>	<p> Presets / user settings Standard presets: 24; User settings: 20 </p>										
<p> Viewing adjustments Tilt: 22° back, -5° forward Rotating screen None On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup, input switch, and brightness Multimedia Integrated stereo speakers (3 watts x 2) Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) HDMI (1.4), digital, HDCP-compliant Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) </p>	<p> Ship group Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter Audio cable, 1.8 meter black power cord </p>										
<p> Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281 </p>	<p> Accessories </p> <table> <tr> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>Lenovo Security Cable Lock</td> <td>57Y4303</td> </tr> <tr> <td>ThinkCentre Extend Arm</td> <td>57Y4352</td> </tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td> <td>55Y9258</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	ThinkCentre Extend Arm	57Y4352	Lenovo Easy Reach Monitor Stand	55Y9258
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Name	LT2452p Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 24-inch monitor• Supports 1920x1200 resolution• High Definition (HD) ready; supports 1080p video• Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing• Cable Management for better user experience• Carrying handle• Recycled content in plastic material• Microsoft® Windows® 8 certified• PVC/Arsenic/Lead/Mercury free (60A6MAR2US)
Case color	Business black	
Type-model	4420-MB2 / 60A6MAR2US	
Panel	TFT-LCD, e-IPS, White LED backlight	
Viewable image size	24" (610mm) diagonal	
Max view area (W x H)	20.4" x 12.8" (518.4mm x 324.0mm)	
Optimum resolution	1920x1200	
Max pixel rate	202.5MHz	
Aspect ratio	16:10	
Pixel pitch (mm)	0.270mm	
Dot/Pixel per Inch	94 dpi	
Brightness	300 nits or cd/m² (typical)	
Contrast ratio	1000:1 (typical)	
Pixel response time	7ms (GtG)	
Color gamut	72%	
Anti-reflective	Anti-reflective, anti-glare	
Viewing angle at 10:1 CR	178° horizontal, 178° vertical	
Stand	Tilt, swivel, pivot, and height adjustable stand	
Bezel width	Sides: 0.78" (19.9mm); top: 0.78" (19.9mm); bottom: 1.12" (28.4mm)	
Dimensions (HxWxD)	15.54-19.87" H x 22" W x 10.13" D; 394.8-504.8mm H x 559.6mm W x 257.3mm D	
Power supply	30 watts typical (w/o USB hub), 40 watts maximum (w/o USB hub), <0.5 watts standby/suspend (w/o USB hub), universal, integrated (no external brick-like power supply)	
Weight	14.70 lb; 6.67kg	
Limited warranty ⁴	3 year (includes backlight)	
Available date	September 2011 / April 2013	
VESA-compliant ²	VESA DDC2B/CI	
Power management	ENERGY STAR [®] 5.1 (4420-MB2) ENERGY STAR [®] 6.0 (60A6MAR2US)	
Ergonomics	ISO 9241-307	
Emission standards	MPR-2, FCC Class B	
Environmental	TCO Displays 5.2 (4420-MB2), TCO Displays 6.0 (60A6MAR2US), TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating , ULE Gold	
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1280x800, 1366x768 WXGA+: 1440x900 UXGA: 1600x1200 WSXGA+: 1680x1050 Full HD: 1920x1080 WUXGA: 1920x1200	
Presets / user settings	Standard presets: 30; User settings: 20	
Viewing adjustments	Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand	
Rotating screen	Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller)	
On screen display	On screen display with digital user controls (8 languages)	
Control features	Direct access (buttons on front) for automatic image setup, input switch, and brightness	
USB hub	USB 2.0 Hub (1 port into PC, 4 ports for accessories)	
Multiple input	Triple input (three different PCs attach to three different connectors; one PC shows image; select via button)	
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant	
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Note: DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537)	
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI [®] (100mm mount)	
Security	Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	
Ship group	Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter USB cable, 1.8 meter black power cord	
Limited Warranty		
⇒ 3 year limited warranty⁴		
⇒ International Warranty Service⁵		
⇒ Replacement normally arrives in two business days, excluding holidays		
⇒ Lenovo pays all shipping costs for valid warranty claims⁶		
⇒ Service upgrade options⁷		
• 3 year, on site exchange, Mon-Fri 9-5 with next day response (Lenovo Services part number 41C9209)		
• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)		
• 4 year, mail exchange (51J0589)		
• 5 year, mail exchange (51J0590)		
⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		
Accessories		
DisplayPort to DisplayPort Monitor Cable		0A36537
Kensington MicroSaver Cable Lock		73P2582
Kensington Twin Head Cable Lock		45K1620
Lenovo Security Cable Lock		57Y4303
ThinkCentre Extend Arm		57Y4352
Lenovo Easy Reach Monitor Stand		55Y9258
See details at www.lenovo.com/support/monitoraccessories		
See all monitors at www.lenovo.com/thinkvision		

See footnotes for important warranty information
US model announced September 13, 2011 or April 16, 2013
US model 4420-MB2 withdrawn effective October 31, 2013

<div>Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Max pixel rate Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD, excluding stand) Dimensions (HxWxD, including stand) Power supply Weight Limited warranty⁴ Available date VESA-compliant² Power management Ergonomics Emission standards Environmental</div>		<div>LT2934z Panorama Monitor Black with a dark metallic bezel 60A5RAR1US TFT-LCD, AH-IPS, White LED backlight 29" (730.25mm) diagonal 26.49" x 11.17" (672.8mm x 283.8mm) 2560x1080 205MHz (VGA/HDMI/DVI/DP); 75MHz (MHL) 21:9 0.0876 x 0.2628mm 96 dpi 300 nits or cd/m² (typical) 1000:1 (typical) 7ms (Grey To Grey average) 72% (NTSC, CIE 1931); 100% (sRGB 1931) 178° horizontal, 178° vertical Tilt, swivel, and height adjustable stand <i>Sides/top/bottom: 0.079" (2.0mm)</i> 13.10" H x 27.50" W x 2.00" D; 361.7mm H x 699.2mm W x 50.0mm D 15.00" H x 27.50" W x 9.40" D; 380.0mm H x 699.2mm W x 239.7mm D 50 watts typical, 100 watts maximum, <1.2 watts sleep/off; <0.5 watts switch off; integrated (no external brick-like power supply) 18.30 lb; 8.3kg (including stand) 3 year (includes backlight) October 2013 VESA DDC2B/CI ENERGY STAR[®] 6.0 ISO 9241-307 FCC Class B TCO Displays 6.0, TCO Certified Edge 1.2, RoHS, EPEAT™ Gold rating, ULE Gold</div>		<div>Features<ul style="list-style-type: none">• Panorama 29-inch IPS monitor• Supports 2560x1080 resolution• PiP(Picture in Picture) Anywhere Solution (software)• One-Switch Toggle features quickly switching keyboard and mouse from one PC to another• 4-Ports USB hub, support USB 3.0 and USB 2.0• Support DaisyChain• Integrated FHD Webcam, two digital microphones and 3watts x 2 stereo speakers• Dedicated VoIP controls• Displays content from 2 PCs in one screen• Arsenic/Lead/Mercury free• Microsoft® Windows® 7/ Windows 8/ Windows 8.1 certified</div>	
<div>Preset resolutions </div>					

<div>Name</div> <div>Case color</div> <div>Type-model</div> <div>Panel</div> <div>Viewable image size</div> <div>Max view area (W x H)</div> <div>Optimum resolution</div> <div>Max pixel rate</div> <div>Aspect ratio</div> <div>Pixel pitch (mm)</div> <div>Dot/Pixel per Inch</div> <div>Brightness</div> <div>Contrast ratio</div> <div>Pixel response time</div> <div>Color gamut</div> <div>Viewing angle at 10:1 CR</div> <div>Stand</div> <div>Bezel width</div> <div>Dimensions</div> <div>(HxWxD, excluding stand)</div> <div>Dimensions</div> <div>(HxWxD, including stand)</div> <div>Power supply</div> <div>Weight</div> <div>Limited warranty⁴</div> <div>Available date</div> <div>VESA-compliant²</div> <div>Power management</div> <div>Ergonomics</div> <div>Emission standards</div> <div>Environmental</div> <div>Preset resolutions</div> <div>Presets / user settings</div> <div>Viewing adjustments</div> <div>Rotating screen</div> <div>On screen display</div> <div>Control features</div> <div>USB hub</div> <div>Multiple input</div> <div>Monitor connectors</div> <div>Signal cables</div> <div>Mounting features</div> <div>Security</div> <div>Ship group</div>	<div>LT3053p Wide Flat Panel Monitor</div> <div>Business black</div> <div>60A4RAR1US</div> <div>TFT-LCD, AH-IPS, White LED backlight</div> <div>30" (762mm) diagonal</div> <div>25.2" x 15.8" (641.3mm x 400.8mm)</div> <div>2560x1600</div> <div>205MHz</div> <div>16:10</div> <div>0.251mm</div> <div>101 dpi</div> <div>350 nits or cd/m² (typical)</div> <div>1000:1 (typical)</div> <div>6ms (Grey To Grey average)</div> <div>99% (Adobe RGB)</div> <div>178° horizontal, 178° vertical</div> <div>Tilt, swivel, pivot, and height adjustable stand</div> <div>Sides: 0.91" (23.1mm); top: 0.91" (23.2mm); bottom: 0.91" (23.1mm)</div> <div>17.69" H x 27.17" W x 2.44" D;</div> <div>449.3mm H x 690mm W x 62mm D</div> <div>18.55" H x 27.17" W x 9.51" D;</div> <div>471.1mm H x 690mm W x 241.5mm D</div> <div>88 watts typical (w/o USB hub),</div> <div>130 watts maximum (w/o USB hub),</div> <div><1.2 watts sleep/off (w/o USB hub);</div> <div><0.5 watts switch off (w/o USB hub);</div> <div>integrated (no external brick-like power supply)</div> <div>25.35 lb; 11.5kg (including stand and shading hood)</div> <div>3 year (includes backlight)</div> <div>March 2013</div> <div>VESA DDC2B/CI</div> <div>ENERGY STAR[®] 6.0</div> <div>ISO 9241-307</div> <div>FCC Class B</div> <div>TCO Displays 6.0, TCO Certified Edge 1.2, RoHS,</div> <div>EPEAT[™] Gold rating, ULE Gold</div> <div>VGA: 640x350, 640x480, 720x400</div> <div>SVGA: 800x600</div> <div>XGA: 1024x768, 1152x864</div> <div>SXGA: 1280x1024</div> <div>WXGA: 1280x720, 1280x768, 1280x800, 1360x768</div> <div>WXGA+: 1440x900, 1600x900</div> <div>WSXGA+: 1680x1050</div> <div>Full HD: 1920x1080</div> <div>WUXGA: 1920x1200</div> <div>WQXGA: 2560x1600</div> <div>other: 640x1600, 1280x1600, 1920x1600,</div> <div>Standard presets: 21; user settings: 20</div> <div>Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand</div> <div>Screen pivots 90 degrees from landscape to portrait</div> <div>On screen display with digital user controls (8 languages)</div> <div>Direct access (buttons on front) for automatic image setup, input switch, and brightness</div> <div>USB Hub (1 USB 3.0 w/Battery charger, 2 USB 3.0, 2 USB 2.0)</div> <div>Support VGA, DVI-D, HDMI, DisplayPort, MHL connections (Mobile High-definition Link)</div> <div>(1) VGA 15-pin D-shell, analog, blue</div> <div>(2) DisplayPort (1.2), digital, black, HDCP-compliant</div> <div>(3) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant</div> <div>(4) HDMI (1.4), digital, HDCP-compliant</div> <div>(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter</div> <div>(2) detachable, DisplayPort at each end, digital, 1.8 meter</div> <div>(3) detachable, DVI-D at each end, digital, 1.8 meter</div> <div>Note: HDMI cable is not included</div> <div>Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI[®] (100mm mount)</div> <div>Security keyhole for attachment of optional cable lock (Kensington[®] lock-compatible)</div> <div>Monitor, toolless detachable stand, shading hood, Quick start and safety poster, CD with multilingual User's Guide, setup test pattern, Picture In Picture Anywhere installation files and user guide, 1.8 meter analog signal cable, 1.8 meter DisplayPort cable, 1.8 meter DVI-D cable, 1.8 meter USB 3.0 cable, 1.8 meter USB 2.0 cable, 1.8 meter black power cord</div>	<div>Features</div> <div>• Widescreen 30-inch monitor</div> <div>• Supports 2560x1600 resolution</div> <div>• PiP(Picture in Picture) Anywhere Solution (software)</div> <div>• 5-Ports USB hub, support USB 3.0 and USB 2.0</div> <div>• Support VGA, DVI, HDMI, DisplayPort and MHL</div> <div>• Support DaisyChain</div> <div>• Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing</div> <div>• Bundled Professional Hood</div> <div>• Support Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket</div> <div>• Arsenic/Lead/Mercury free</div> <div>• Microsoft[®] Windows[®] 7 certified</div> <div>• Microsoft Windows 8 certified</div>
	<div></div> <div>ThinkVision LT3053p Wide Monitor</div>	
<div>Limited Warranty</div> <div>⇒ 3 year limited warranty⁴</div> <div>⇒ International Warranty Service⁵</div> <div>⇒ Replacement normally arrives in two business days, excluding holidays</div> <div>⇒ Lenovo pays all shipping costs for valid warranty claims⁶</div> <div>⇒ Service upgrade options:⁷</div> <div>• 3 year, on site exchange, Mon-Fri 9-5 with next day response</div> <div>(Lenovo Services part number 41C9209)</div> <div>• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)</div> <div>• 4 year, mail exchange (51J0589)</div> <div>• 5 year, mail exchange (51J0590)</div> <div>⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>	<div>Accessories</div> <div>Kensington MicroSaver Cable Lock</div> <div>73P2582</div> <div>Kensington Twin Head Cable Lock</div> <div>45K1620</div> <div>Lenovo Security Cable Lock</div> <div>57Y4303</div> <div>ThinkCentre Extend Arm</div> <div>57Y4352</div> <div>Lenovo Easy Reach Monitor Stand</div> <div>55Y9258</div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>	

Disclaimer

Lenovo provides the information in the Product Specifications Reference (PSREF) withdrawn product books on an "AS-IS" basis. Because the actual products have been withdrawn from marketing, the information in these withdrawn product books is no longer maintained or updated. The referenced footnote numbering may not correspond with the listed footnotes.

PSREF books for the withdrawn systems:

http://www.lenovo.com/psref/psrefs_withdrawn.html

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, go to: http://support.lenovo.com/en_US/product-service/warranty-status/WarrantyPolicies.page. Lenovo makes no representation or warranty regarding third party products or services.

¹ **ISO-compliant:** Compliance with ISO 9241 Part 3, ISO Part 7, ISO Part 8, and/or ISO 13406 Part 2 is dependent on a complete ISO-capable platform of a system unit, monitor, video subsystem, operating system and fonts.

² **VESA:** Requires attachment to suitably configured system with similarly enabled operating system.

³ **ENERGY STAR:** As an ENERGY STAR partner, Lenovo has determined that this product meets the ENERGY STAR 4.0 or 4.1 guidelines for energy efficiency. Requires attachment to suitably configured system.

⁴ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

⁵ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

⁶ **Lenovo pays all shipping costs** for warranty repairs during limited warranty period.

⁷ **Lenovo Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See terms and conditions for complete details and restrictions.

⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For machines with EasyServ or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.

¹⁰ **TAA:** Monitor is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.

¹¹ **Post-warranty annual maintenance agreement:** Service begins at the end of the base warranty or the end of any other applied warranty and maintenance option, whichever occurs last. Service delivery is not available the same day the maintenance agreement is purchased. Maintenance agreements must be purchased and the registration successfully completed prior to the service being available.

¹² **Halogen:** Less than 900 Parts Per Million. Low halogen is defined in accordance with IPC-401B and draft IPC-J-STD 709 Class 1 requirements.

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