



# *Product Specifications Reference Lenovo® ThinkPad® Notebooks 2013 to present - withdrawn*

*January 2015 - Version 466*



[http://www.lenovo.com/psref/psrefs\\_withdrawn.html](http://www.lenovo.com/psref/psrefs_withdrawn.html)

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# Summary of Changes

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This section describes the withdrawn products which are added in this edition and in previous editions.

## May 27, 2014 - Version 454

### ► Withdrawn product(s)

ThinkPad X131e is withdrawn and added in the book

ThinkPad T430u is withdrawn and added in the book

## June 18, 2014 - Version 455

### ► Changes in this update

ThinkPad X131e is reactive and return into tabook

## August 19, 2014 - Version 458

### ► Withdrawn product(s)

ThinkPad L430 is withdrawn and added in the book

ThinkPad L530 is withdrawn and added in the book

ThinkPad T430 is withdrawn and added in the book

ThinkPad T430s is withdrawn and added in the book

ThinkPad T431s is withdrawn and added in the book

ThinkPad T530 is withdrawn and added in the book

ThinkPad W530 is withdrawn and added in the book

ThinkPad X230 is withdrawn and added in the book

ThinkPad X230 Tablet is withdrawn and added in the book

ThinkPad ThinkPad X1 Carbon is withdrawn and added in the book

## January 7, 2015 - Version 466

### ► Withdrawn product(s)

ThinkPad X131e is withdrawn and added in the book

ThinkPad X140e is withdrawn and added in the book



Lenovo® ThinkPad L430



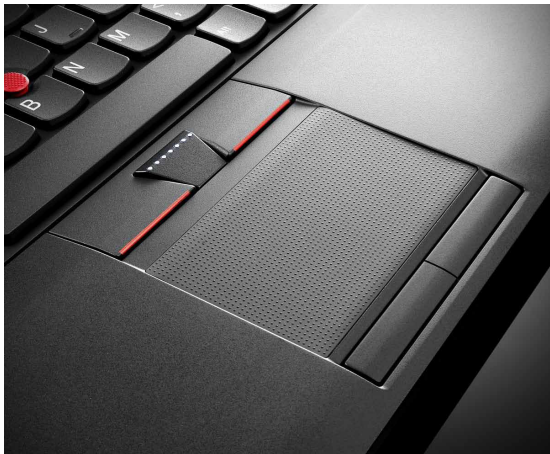
Lenovo ThinkPad L430



Lenovo ThinkPad L430



Lenovo ThinkPad L430



Lenovo ThinkPad L430



Lenovo ThinkPad L430

# ThinkPad L430 2468 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <b>Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system <sup>20</sup> Genuine Windows® 7 Professional 64	
Memory	8GB max <sup>7</sup> / 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 <sup>14</sup> (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 <sup>14</sup> (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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000</b> 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 <sup>13</sup> , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch			
ThinkLight™	None			
Dimensions <sup>3</sup>	14.0W" (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm			
Weight <sup>2</sup>	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 <sup>10</sup>	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr			
Chipset	<b>Mobile Intel HM76 Express Chipset</b>			
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 <sup>4</sup>	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2		65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>	
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		For compatible accessories, please go to O-L430 sheet;	
Security chip	Trusted Platform Module, TCG 1.2-compliant		For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet	
Fingerprint reader	None			
Limited warranty <sup>12</sup>	1-year - depot repair service / service upgrades <sup>22</sup> 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 <sup>5</sup> rpm	PCle Mini Card WLAN	PCle 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 <sup>28</sup>	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 <b>Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), HT technology <b>Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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: <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None			
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	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	<b>Mobile Intel HM76 Express Chipset</b> 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)			
PCle Mini Card PCle WLAN <sup>4</sup>	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			
PCle 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 <sup>12</sup> <b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available				

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

See footnotes for more detailed information

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(CD1-7) June 2013

# ThinkPad L430 2469 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	8GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>14.0W" (WxDxH):</b> 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	<b>Mobile Intel HM76 Express Chipset</b> 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 <sup>4</sup>	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		
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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

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

See footnotes for more detailed information

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# ThinkPad L430 2469 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), HT technology <b>Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology								<b>Preloaded operating system<sup>20</sup></b> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass												
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch												
ThinkLight™	None												
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm												
Weight <sup>2</sup>	<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 <sup>10</sup>	<i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr												
Chipset	<b>Mobile Intel HM76 Express Chipset</b>												
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 <sup>4</sup>	<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												
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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available												

See footnotes for more detailed information

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>9</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Mini 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)
2465-33U	i5-3360M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<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	<b>Mobile Intel HM76 Express Chipset</b> <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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

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

See footnotes for more detailed information

# ThinkPad L430 2465 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Windows® 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li><li>• PC Device Stage</li><li>• Cyberlink Power2Go (DVD±RW)</li><li>• Cyberlink PowerProducer (DVD±RW)</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security (30 days of virus definitions)</li><li>• Skype™</li></ul>
Memory	8GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm		
Weight <sup>2</sup>	<b>6-cell:</b> from 5.11 lb (2.32kg); <b>9-cell:</b> 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 <sup>10</sup>	<b>6-cell (57Whr):</b> up to 7.5 hr; <b>9-cell (94Whr):</b> up to 12.3 hr		
Chipset	<b>Mobile Intel HM76 Express Chipset</b>		
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 <sup>4</sup>	<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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

Supports ThinkVantage® technologies		
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>		
For compatible accessories, please go to O-L430 sheet;		
For Lenovo service<sup>22</sup> upgrade options, please go to QP-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 <sup>5</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology		Preloaded operating system <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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: <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None			
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	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	<b>Mobile Intel HM76 Express Chipset</b> 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 <sup>4</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>	
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 <sup>22</sup> upgrade options, please go to QP-TA sheet	
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available			

See footnotes for more detailed information

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# ThinkPad L430 2465 (Optimus)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>9</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology								<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64				
Memory	8GB max <sup>7</sup> / 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								<b>Ready to install applications<sup>14</sup></b> (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™								<b>Preloaded applications<sup>14</sup></b> (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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass												
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch												
ThinkLight™	None												
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm												
Weight <sup>2</sup>	<b>6-cell:</b> from 5.16 lb (2.34kg); <b>9-cell:</b> 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 <sup>10</sup>	<b>6-cell (57Whr):</b> up to 5.6 hr; <b>9-cell (94Whr):</b> up to 9.3 hr												
Chipset	<b>Mobile Intel HM76 Express Chipset</b>												
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available												

See footnotes for more detailed information

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# ThinkPad L430 2465 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Card slot	Finger print reader	Blue-tooth	Battery cells	Preload	Ann Date (mm/yy)
2465-7DU	i7-3520M	4GBx2	14.0" HD+	720p	180G SSD	Intel 6205 <sup>28</sup>	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 <b>Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm		
Weight <sup>2</sup>	<b>6-cell:</b> from 5.16 lb (2.34kg); <b>9-cell:</b> 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 <sup>10</sup>	<b>6-cell (57Whr):</b> up to 5.6 hr; <b>9-cell (94Whr):</b> up to 9.3 hr		
Chipset	<b>Mobile Intel HM76 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

Supports ThinkVantage® technologies		
90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>		
For compatible accessories, please go to O-L430 sheet; For Lenovo service<sup>22</sup> upgrade options, please go to QP-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 <sup>3</sup> 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 <sup>28</sup>	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	G P 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	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	upg	None	None	Exp 54	Finger	BT	6	G P Pro 64	06/12
2466-3EU	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>14.0W" (WxDxH):</b> 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	<b>Mobile Intel HM76 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available		For compatible accessories, please go to O-L430 sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

# ThinkPad L430 2466 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000</b> , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - <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 <sup>7</sup> / 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		<b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>	
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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch			
ThinkLight™	None			
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm			
Weight <sup>2</sup>	<b>6-cell:</b> from 5.11 lb (2.32kg); <b>9-cell:</b> 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 <sup>10</sup>	<b>6-cell (57Whr):</b> up to 7.5 hr; <b>9-cell (94Whr):</b> up to 12.3 hr			
Chipset	<b>Mobile Intel HM76 Express Chipset</b>			
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 <sup>4</sup>	<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			
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		65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>	
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		For compatible accessories, please go to O-L430 sheet;	
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available		For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet	

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 <sup>6</sup> 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 <sup>28</sup>	None	Express 54	Finger	BT	9	No	Pro 64 06/12

Positioning Processor	Mainstream business performance; two spindles <b>Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64		
Memory	8GB max <sup>7</sup> / 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										<b>Ready to install applications</b> <sup>14</sup> (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™										<b>Preloaded applications</b> <sup>14</sup> (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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass												
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch												
ThinkLight™	None												
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.94" x 9.57" x 1.17–1.24"; 354mm x 243mm x 29.6–31.4mm												
Weight <sup>2</sup>	<b>6-cell:</b> from 5.16 lb (2.34kg); <b>9-cell:</b> 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 <sup>10</sup>	<b>6-cell (57Whr):</b> up to 5.6 hr; <b>9-cell (94Whr):</b> up to 9.3 hr												
Chipset	<b>Mobile Intel HM76 Express Chipset</b>												
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available												

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 <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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 <sup>57</sup>	41N3043	ann 06/27/06

<sup>57</sup> 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 <sup>44</sup>	40Y7625	ann 09/20/05

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

More information at [www.lenovo.com/alldaycomputing](http://www.lenovo.com/alldaycomputing)

ThinkPad 65W AC Adapter <sup>45</sup>	40Y7696	ann 01/05/06
<sup>45</sup> 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](http://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](http://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](http://www.lenovo.com/support/cases)

## Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann 09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) <sup>69</sup>	2578HB6	ann 10/20/09
<sup>69</sup> 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](http://www.lenovo.com/support/monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems





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 <sup>®</sup> 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 <b>Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000</b> 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 <sup>13</sup> , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<i>15.6W" (WxDxH):</i> 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm		
Weight <sup>2</sup>	<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 <sup>10</sup>	<i>6-cell (57Whr):</i> up to 7.5 hr; <i>9-cell (94Whr):</i> up to 12.3 hr		
Chipset	<b>Mobile Intel HM76 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

Supports ThinkVantage® technologies		
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>		
For compatible accessories, please go to O-L530 sheet;		
For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet		

See footnotes for more detailed information

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# ThinkPad L530 2481 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i3-2348M processor (2 cores, 2.30GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i3-3110M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), HT technology <b>Intel Core i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - <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 <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>15.6W"</b> (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm		
Weight <sup>2</sup>	<b>6-cell:</b> from 5.69 lb (2.58kg); <b>9-cell:</b> 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 <sup>10</sup>	<b>6-cell (57Whr):</b> up to 7.5 hr; <b>9-cell (94Whr):</b> up to 12.3 hr		
Chipset	<b>Mobile Intel HM76 Express Chipset</b>		
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 <sup>4</sup>	<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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

Supports ThinkVantage® technologies
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
For compatible accessories, please go to O-L530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

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# ThinkPad L530 2485 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>9</sup> 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 <sup>28</sup>	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	<b>Mainstream business performance; two spindles</b> <b>Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology								<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None													
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>15.6W"</b> (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	<b>Mobile Intel HM76 Express Chipset</b> 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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>								Supports ThinkVantage® technologies  65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-L530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet					

See footnotes for more detailed information

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# ThinkPad L530 2478

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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	Ann Date (mm/yy)
2478-23U	i7-3520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 <sup>28</sup>	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	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	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 <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager				
Memory	8GB max <sup>7</sup> / 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											<b>Preloaded applications<sup>14</sup></b> (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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None															
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>15.6W" (WxDxH):</b> 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	<b>Mobile Intel HM76 Express Chipset</b> <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 <sup>4</sup>	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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
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 <sup>22</sup> upgrade options, please go to QP-TA sheet				
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available															

See footnotes for more detailed information



# ThinkPad L530 2478 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - <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 <sup>7</sup> / 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		<b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch			
ThinkLight™	None			
Dimensions <sup>3</sup>	<b>15.6W"</b> (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm			
Weight <sup>2</sup>	<b>6-cell:</b> from 5.69 lb (2.58kg); <b>9-cell:</b> 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 <sup>10</sup>	<b>6-cell (57Whr):</b> up to 7.5 hr; <b>9-cell (94Whr):</b> up to 12.3 hr			
Chipset	<b>Mobile Intel HM76 Express Chipset</b>			
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 <sup>4</sup>	<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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		Supports ThinkVantage® technologies  65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-L530 sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet	

See footnotes for more detailed information

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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
2479-3U	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>15.6W" (WxDxH):</b> 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm <b>6-cell:</b> from 5.69 lb (2.58kg); <b>9-cell:</b> from 6.05 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell, HW Authentication <b>6-cell (57Whr):</b> up to 7.5 hr; <b>9-cell (94Whr):</b> up to 12.3 hr		
Chipset ExpressCard Smart Card read Multicard Reader Ports	<b>Mobile Intel HM76 Express Chipset</b> <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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available		Supports ThinkVantage® technologies  65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-L530 sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

# ThinkPad L530 2479 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Mainstream business performance; two spindles <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	8GB max <sup>7</sup> / 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										<b>Preloaded applications<sup>5</sup></b> (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™										- <b>Windows 7 models</b> • 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										- <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)				
Widescreen display	Some: <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio										- <b>All models</b> • 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	<b>Intel HD Graphics 4000</b> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch None										For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				
Dimensions <sup>3</sup>	15.6W" (WxDxH): 14.96" x 9.72" x 1.25–1.31"; 380mm x 247mm x 31.7–33.4mm														
Weight <sup>2</sup>	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 <sup>10</sup>	6-cell (57Whr): up to 7.5 hr; 9-cell (94Whr): up to 12.3 hr														
Chipset	<b>Mobile Intel HM76 Express Chipset</b>														
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available														

See footnotes for more detailed information

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# 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 <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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 <sup>57</sup>	41N3043	ann	06/27/06

<sup>57</sup> 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 <sup>44</sup>	40Y7625	ann	09/20/05

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

More information at [www.lenovo.com/alldaycomputing](http://www.lenovo.com/alldaycomputing)

ThinkPad 65W AC Adapter <sup>45</sup>	40Y7696	ann	01/05/06
<sup>45</sup> 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](http://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](http://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](http://www.lenovo.com/support/cases)

## Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) <sup>69</sup>	2578HB6	ann	10/20/09
<sup>69</sup> 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](http://www.lenovo.com/support/monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



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 <sup>2</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager
Memory	16GB max <sup>7</sup> / 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	<b>Preloaded applications<sup>14</sup></b> (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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>22</sup> upgrade options, please go to QP-TA sheet
Limited warranty <sup>12</sup> <b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

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# ThinkPad T430 2342 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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	i5-3320M	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 <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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: <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>14.0W" (WxDxH):</b> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <b>6-cell:</b> from 4.77 lb (2.17kg); <b>9-cell:</b> from 5.13 lb (2.33kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 9.7 hr; <b>9-cell (94Whr):</b> up to 16.2 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 32.5 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>22</sup> upgrade options, please go to QP-TA sheet
Limited warranty <sup>12</sup> <b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available			

See footnotes for more detailed information

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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 <sup>3</sup> 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 <sup>28</sup>	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	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager
Memory	16GB max <sup>7</sup> / 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	<b>Preloaded applications<sup>14</sup></b> (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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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	<b>Supports ThinkVantage® technologies</b>  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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>22</sup> upgrade options, please go to QP-TA sheet
Limited warranty <sup>12</sup> <b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

See footnotes for more detailed information



# ThinkPad T430 2344 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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	Win7 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	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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 <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li><li>• PC Device Stage</li><li>• Cyberlink Power2Go (DVD±RW)</li><li>• Cyberlink PowerProducer (DVD±RW)</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Skype™</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>22</sup> upgrade options, please go to QP-TA sheet
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

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# ThinkPad T430 2342 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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> <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000</b> , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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	DVD burner, 12.7mm Ultrabay Enhanced, removable		
SATA disk	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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 3000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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®	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight		
Touchpad	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass		
ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm		
Weight <sup>2</sup>	<i>6-cell:</i> from 4.77 lb (2.17kg); <i>9-cell:</i> from 5.13 lb (2.33kg)		
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication		
Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>		
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 <sup>4</sup>	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2200, 2x2		
PCIe WWAN	Wireless WAN upgradable		
Carrier	None		
Modem	None		
IEEE 1394	None		
Bluetooth™	None		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	None		
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		
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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>2</sup> 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> <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000</b> , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Windows® 8 Pro 64-bit		
Memory	16GB max <sup>7</sup> / 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										<b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 3000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>		
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 <sup>22</sup> upgrade options, please go to QP-TA sheet		
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available												

See footnotes for more detailed information

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# ThinkPad T430 2344 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology								<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>								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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T430 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet					

See footnotes for more detailed information

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(NZ4-3) August 2012



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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li><li>• PC Device Stage</li><li>• Cyberlink Power2Go (DVD±RW)</li><li>• Cyberlink PowerProducer (DVD±RW)</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security (30 days of virus definitions)</li><li>• Skype™</li></ul>
Memory	16GB max <sup>7</sup> / 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: <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T430 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet			

See footnotes for more detailed information

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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	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	Pro 64 06/12
2347-H7U	i5-3320M	4GBx1	14.0" HD	No	320G 7200	None	Intel 6205	upg	None	None	No	6	vPro	Pro 64 06/12
2347-H6U	i5-3320M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 6205	upg	None	Finger	BT	6	vPro	Pro 64 06/12
2347-H2U	i5-3320M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 6205	upg	None	Finger	BT	6	vPro	Pro 64 06/12
2347-GZU	i7-3520M	4GBx1	14.0" HD	720p	128G SSD	None	Intel 6205	upg	None	Finger	BT	6	vPro	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	Pro 64 09/12
2347-K8U	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	None	Intel 6205	Gobi	Verizon	Finger	BT	6	vPro	Pro 64 09/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology			<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
For compatible accessories, please go to O-T430 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>5</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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 <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>14.0W" (WxDxH):</b> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			
For compatible accessories, please go to O-T430 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>8</sup> rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat-Blue-tooth	tery cells	Global (G) Intel vPro	GMP (P) Preload	Ann Date (mm/yy)
2347-G9U	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	None	Intel 6205 <sup>28</sup>	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> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>14.0W" (WxDxH):</b> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <b>6-cell:</b> from 4.77 lb (2.17kg); <b>9-cell:</b> 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 <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 9.4 hr; <b>9-cell (94Whr):</b> up to 15.8 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 31.6 hr													
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T430 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				

See footnotes for more detailed information

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# ThinkPad T430 2347 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat-Blue-tooth	tery cells	Intel vPro	Preload	Ann Date (mm/yy)
2347-L5U	i7-3520M	4GBx1	14.0" HD+	720p	180G SSD	Backlit	Intel 6205 <sup>28</sup>	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> <b>Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li><li>• PC Device Stage</li><li>• Cyberlink Power2Go (DVD±RW)</li><li>• Cyberlink PowerProducer (DVD±RW)</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Skype™</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

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 <sup>3</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>14.0W" (WxDxH):</b> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time/ service upgrades <sup>22</sup> 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<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>
		For compatible accessories, please go to O-T430 sheet;
		For Lenovo service<sup>22</sup> upgrade options, please go to QP-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 <sup>1</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed) - <b>Windows 7 models</b> • 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) - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - <b>All models</b> • 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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>14.0W" (WxDxH):</b> 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm <b>6-cell:</b> from 4.77 lb (2.17kg); <b>9-cell:</b> from 5.13 lb (2.33kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Carbon-Fiber Reinforced Plastic														
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 9.7 hr; <b>9-cell (94Whr):</b> up to 16.2 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 32.5 hr														
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Security Security chip Fingerprint reader															
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup> For compatible accessories, please go to O-T430 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				

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 <sup>8</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>14.0W" (WxDxH):</b> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
For compatible accessories, please go to O-T430 sheet;
For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>5</sup> 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 <sup>28</sup>	WWAN upg	Finger	BT 9	vPro	Win7 Pro64	12/12
Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit		
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>* System automatically clocks down for processors with 1333MHz DDR3 memory controller</i>										<b>Preloaded applications<sup>5</sup></b> (only some listed)		
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: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™</i> <i>All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive</i>										<b>- Windows 7 models</b> • 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										<b>- Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)		
Widescreen display	<i>Some: 14.0" (355mm) HD (1366x768) color</i> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some: 14.0" (355mm) HD+ (1600x900) color</i> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio										<b>- All models</b> • 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™		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <i>Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable);</i> <i>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 <sup>13</sup> , 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 <sup>3</sup>	14.0W" (WxDxH): 13.4" x 9.13" x 1.17–1.18"; 340.5mm x 232.0mm x 29.8–29.9mm												
Weight <sup>2</sup>	6-cell: from 4.77 lb (2.17kg); 9-cell: from 5.13 lb (2.33kg)												
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Carbon-Fiber Reinforced Plastic												
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication												
Battery - life <sup>10</sup>	6-cell (57Whr): up to 9.4 hr; 9-cell (94Whr): up to 15.8 hr; 9-cell plus 9-cell Slice battery (94Whr, OA36304): up to 31.6 hr												
Chipset	<b>Mobile Intel QM77 Express Chipset</b>												
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 <sup>4</sup>	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® 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	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T430 sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet		

See footnotes for more detailed information

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# ThinkPad T430i 2342 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 (mm/yy)	Ann Date
2342-2ZU	i3-2370M	4GBx1	14.0" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	6	None	None	Pro 64	06/12
2342-2YU	i3-2370M	4GBx1	14.0" HD	720p	320G 7200	None	Intel 2200	WWAN upg	None	None	6	None	None	Pro 64	06/12

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 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	
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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available	

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

<sup>41</sup> 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 <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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) <sup>43</sup>	0A36304	ann	06/05/12

<sup>43</sup> 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 <sup>44</sup>	40Y7625	ann	09/20/05
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<sup>44</sup> Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at [www.lenovo.com/alldaycomputing](http://www.lenovo.com/alldaycomputing)

ThinkPad 65W AC Adapter <sup>45</sup>	40Y7696	ann	01/05/06
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<sup>45</sup> 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](http://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](http://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](http://www.lenovo.com/support/cases)

## Monitors

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

<sup>69</sup> 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](http://www.lenovo.com/support/monitors)  
[www.lenovo.com/support/thinkpad/optimus-monitors](http://www.lenovo.com/support/thinkpad/optimus-monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



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 <sup>8</sup> 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 <sup>28</sup>	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	<i>Premiere performance and ultraportability; two spindles</i> <b>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</b>		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable		
Bay battery	<i>Some:</i> ThinkPad Battery 43 (3-cell, bay) (0A36310), used in Option Bay		
Ultrabay	One modular bay for interchangeable devices (right side), 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 / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™		
mSATA™ SSD	<i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive <i>None</i>		
Widescreen display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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, optional LED backlight		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , 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 <sup>3</sup>	<i>14.0W" (WxDxH):</i> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm		
Weight <sup>2</sup>	<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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>		
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 <sup>4</sup>	<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		
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	<i>Some:</i> 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	<i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty <sup>12</sup> <b>1-year</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
For compatible accessories, please go to O-T430-S sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

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 <sup>8</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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 <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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass		
ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch		
Dimensions <sup>3</sup>	Illuminates the keyboard to improve visibility in low-light conditions		
Weight <sup>2</sup>	<b>14.0W" (WxDxH):</b> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm		
Case material	<b>6-cell:</b> from 3.96 lb (1.79kg)		
Battery - type	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy		
Battery - life <sup>10</sup>	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication <b>6-cell (43.2Whr):</b> up to 7.6 hr; <b>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</b> up to 13.2 hr		
Chipset	<b>Mobile Intel QM77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>		
For compatible accessories, please go to O-T430-S sheet;		
For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet		

See footnotes for more detailed information

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# ThinkPad T430s 2353 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB <sup>8</sup> 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 <sup>28</sup>	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	<i>Premiere performance and ultraportability; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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 <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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available		For compatible accessories, please go to O-T430-S sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

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## ThinkPad T430s 2353 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> rpm	Optical or battery	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth cells	Bat-tery vPro	Pre-load	Ann Date (mm/yy)
2353-5U	i5-3210M	4GBx1	14.0" HD	720p	500G 7200	DVD±RW	None	Intel 6205 <sup>28</sup>	WWAN upg	None	No	6	None	Pro 64 07/12
2353-6U	i5-3210M	4GBx1	14.0" HD	720p	500G 7200	DVD±RW	Backlit	Intel 6205	WWAN upg	Finger	BT	6	None	Pro 64 07/12

Positioning Processor	Premiere performance and ultraportability; two spindles <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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 <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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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 <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5200M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 None 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 <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information

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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>1</sup> 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 <sup>28</sup>	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	<b>Premiere performance and ultraportability; two spindles</b> <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup> (only some listed)</b> <b>- Windows 7 models</b> <ul style="list-style-type: none"> <li>• Lenovo® Message Center Plus</li> <li>• ThinkVantage Product Recovery</li> <li>• Access Connections™</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo SimpleTap</li> <li>• Corel® WinDVD® (DVD±RW)</li> <li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li> <li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li> </ul> <b>- Windows 8 models</b> <ul style="list-style-type: none"> <li>• Lenovo Support</li> <li>• Lenovo Companion</li> <li>• Lenovo QuickLaunch</li> <li>• PC Device Stage</li> <li>• Cyberlink Power2Go (DVD±RW)</li> <li>• Cyberlink PowerProducer (DVD±RW)</li> </ul> <b>- All models</b> <ul style="list-style-type: none"> <li>• Lenovo Solution Center</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• Fingerprint Software (fingerprint models)</li> <li>• Lenovo Cloud Storage by SugarSync</li> <li>• Microsoft® Office preloaded; purchase a product key to activate</li> <li>• Norton™ Internet Security (30 days of virus definitions)</li> <li>• Skype™</li> </ul>				
Memory	16GB max <sup>7</sup> / 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: <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5200M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , 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 <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm														
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (43.2Whr):</b> up to 7.6 hr; <b>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</b> up to 13.2 hr														
Chipset	<b>Mobile Intel QM77 Express Chipset</b>														
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>														

See footnotes for more detailed information

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# ThinkPad T430s 2355

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>1</sup> 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 <sup>28</sup>	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	<b>Premiere performance and ultraportability; two spindles</b> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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: <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <b>Maximum external resolution:</b> 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 <sup>13</sup> , 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 <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm														
Weight <sup>2</sup>	<b>6-cell:</b> from 3.96 lb (1.79kg)														
Case material	<b>Display cover:</b> Hybrid Carbon-fiber reinforced plastic; <b>Bottom:</b> Magnesium alloy														
Battery - type	Lithium Ion 6-cell, supports optional Ultrabay Slim battery as 2nd battery, HW authentication														
Battery - life <sup>10</sup>	<b>6-cell (43.2Whr):</b> up to 7.6 hr; <b>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</b> up to 13.2 hr														
Chipset	<b>Mobile Intel QM77 Express Chipset</b>														
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 <sup>4</sup>	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 (Lewistown), 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T430-S sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				

See footnotes for more detailed information

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# ThinkPad T430s 2355 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Finger print reader	Bat- tery 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 <sup>28</sup>	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	<i>Premiere performance and ultraportability; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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 <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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>14.0W" (WxDxH):</b> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm <b>6-cell:</b> 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 <b>6-cell (43.2Whr):</b> up to 7.6 hr; <b>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</b> up to 13.2 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 Trusted Platform Module, TCG 1.2-compliant		
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		
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades</b> <sup>22</sup> 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<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>
			For compatible accessories, please go to O-T430-S sheet; For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet

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 <sup>8</sup> rpm	Optical or battery	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Bat- tery Blue- tooth cells	Global (G) Intel vPro (P)	Ann Date (mm/yy)
2355-HJU	i5-3320M	4GBx2	14.0" HD+	720p	180G SSD	DVD±RW	None	Intel 6205 <sup>28</sup>	WWAN upg	Finger	BT	6 vPro	06/12
2355-HHU	i5-3320M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	None	Intel 6205	WWAN upg	Finger	BT	6 vPro	06/12
2355-HGU	i5-3320M	4GBx1	14.0" HD+	720p	500G 7200	DVD±RW	None	Intel 6205	WWAN upg	Finger	BT	6 vPro	06/12

• A depot repair service 3-year limited warranty

Positioning Processor	Premiere performance and ultraportability; two spindles <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology			<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5200M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , 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 <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm			
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (43.2Whr):</b> up to 7.6 hr; <b>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</b> up to 13.2 hr			
Chipset	<b>Mobile Intel QM77 Express Chipset</b>			
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available			

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<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>			
For compatible accessories, please go to O-T430-S sheet; For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet			

See footnotes for more detailed information

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## ThinkPad T430s 2355 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

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

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

Positioning Processor	Premiere performance and ultraportability; two spindles <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit
Memory	16GB max <sup>7</sup> / 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	<b>Preloaded applications</b> <sup>5</sup> (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	- <b>Windows 7 models</b> • 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: <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	- <b>Windows 8 models</b> • 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	- <b>All models</b> • 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5200M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available	For compatible accessories, please go to O-T430-S sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>8</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty**

Positioning Processor	<i>Premiere performance and ultraportability; two spindles</i> <b>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</b> <b>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</b>										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64				
Memory	16GB max <sup>7</sup> / 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										<b>Ready to install applications<sup>14</sup></b> (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										<b>Preloaded applications<sup>14</sup></b> (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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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										<b>Supports ThinkVantage® technologies</b>				
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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> available										For compatible accessories, please go to O-T430-S sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				

See footnotes for more detailed information

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(SN4-5) November 2012

# ThinkPad T430s 2356 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	<i>Premiere performance and ultraportability; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed) <b>- Windows 7 models</b> • 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) <b>- Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) <b>- All models</b> • 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 <sup>7</sup> / 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 <i>Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high</i> <i>Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm 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: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio</i> <i>Some: 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio</i>													
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	<b>Intel HD Graphics 4000</b> 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®	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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions <sup>3</sup>	14.0W" (WxDxH): 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm													
Weight <sup>2</sup>	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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b>													
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 <sup>4</sup>	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	Power On Authentication, supports the security chip													
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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup> For compatible accessories, please go to O-T430-S sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>5</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty*

Positioning Processor	Premiere performance and ultraportability; two spindles <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64
Memory	16GB max <sup>7</sup> / 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	<b>Ready to install applications</b> <sup>14</sup> (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	<b>Preloaded applications</b> <sup>14</sup> (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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5200M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup>	<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)	
Case material Battery - type Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> 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	
PCle Mini Card PCle WLAN <sup>4</sup> PCle 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	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 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Limited warranty <sup>12</sup>	<b>3-years</b> /1-year battery, <b>limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available	For compatible accessories, please go to O-T430-S sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>5</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Premiere performance and ultraportability; two spindles <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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 <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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 <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> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5200M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>14.0W" (WxDxH):</b> 13.5" x 9.05" x 0.83–1.02"; 343mm x 230mm x 21.2–26.0mm <b>6-cell:</b> 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 <b>6-cell (43.2Whr):</b> up to 7.6 hr; <b>6-cell plus 3-cell Bay battery (31.3Whr, 0A36310):</b> up to 13.2 hr		
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available		

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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
For compatible accessories, please go to O-T430-S sheet;
For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>41</sup>	0A65631	ann	06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD <sup>41</sup>	0A65632	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD <sup>41</sup>	0A65635	ann	06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm			
Self Encrypting (SED) OPAL Capable HDD <sup>41</sup>	0A65636	ann	08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive <sup>41</sup>	0A65629	ann	06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive <sup>41</sup>	0A65630	ann	06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD <sup>41</sup>	0A65620	ann	05/15/12

<sup>41</sup> 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 <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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) <sup>42</sup>	0A36310	ann	06/05/12
<sup>42</sup> Used in Ultrabay Slim bay.			
ThinkPad External Battery Charger <sup>44</sup>	40Y7625	ann	09/20/05
<sup>44</sup> Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.			

More information at [www.lenovo.com/alldaycomputing](http://www.lenovo.com/alldaycomputing)

ThinkPad 65W AC Adapter <sup>45</sup>	40Y7696	ann	01/05/06
<sup>45</sup> 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](http://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](http://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](http://www.lenovo.com/support/cases)

## Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann	09/13/11
ThinkVision L2251x Wide 22" (VGA, DP) <sup>69</sup>	2578HB6	ann	10/20/09
<sup>69</sup> 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](http://www.lenovo.com/support/monitors)  
[www.lenovo.com/support/thinkpad/optimus-monitors](http://www.lenovo.com/support/thinkpad/optimus-monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad T430u



Lenovo ThinkPad T430u



Lenovo ThinkPad T430u



Lenovo ThinkPad T430u



Lenovo ThinkPad T430u



Lenovo ThinkPad T430u



# ThinkPad T430u 3351 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
3351-4VU	i5-3317U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	None	BT	3	Pro 64	08/12
3351-33U	i5-3317U	4GBx1	14.0" HD	720p	320G 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**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<b>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</b>							<b>Preloaded operating system</b> <sup>20F</sup> Genuine Windows® 7 Professional 64				
Memory	8GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets							<b>Ready to install applications</b> <sup>14</sup> (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™							<b>Preloaded applications</b> <sup>14</sup> (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 • 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 • Microsoft® Office 2010 preloaded; purchase product key to activate				
mSATA™ SSD	mSATA Solid State Drive (SSD), via PCIe Mini Card slot											
Widescreen display	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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	TrackPoint® pointing device, Internet Scroll Bar <sup>13</sup>											
ThinkLight™	UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm											
Weight <sup>2</sup>	<b>3-cell:</b> 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 <sup>10</sup>	<b>3-cell (47Whr):</b> up to 7.1 hr											
Chipset	<b>Mobile Intel UM77 Express Chipset</b>											
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 <sup>4</sup>	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	<i>Some:</i> AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip											
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available											

See footnotes for more detailed information

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# ThinkPad T430u 3351 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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	<b>Mainstream Ultrabook™; one spindle</b> <b>Intel® Core™ i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology <b>Intel Core i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology <b>Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology							<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit					
Memory	8GB max <sup>7</sup> (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							<b>Preloaded applications<sup>5</sup></b> (only some listed) - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - <b>All models</b> • 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	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>												
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm												
Weight <sup>2</sup>	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 <sup>10</sup>	3-cell (47Whr): up to 7.1 hr												
Chipset	<b>Mobile Intel UM77 Express Chipset</b>												
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 <sup>4</sup>	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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available												

See footnotes for more detailed information

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# ThinkPad T430u 8614 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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	<b>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</b>							<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64				
Memory	8GB max <sup>7</sup> (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							<b>Ready to install applications</b> <sup>14</sup> (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™							<b>Preloaded applications</b> <sup>14</sup> (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	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm											
Weight <sup>2</sup>	<b>3-cell:</b> 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 <sup>10</sup>	<b>3-cell (47Whr):</b> up to 7.1 hr											
Chipset	<b>Mobile Intel UM77 Express Chipset</b>											
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>8</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Battery 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 <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader®  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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 <sup>7</sup> (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	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touchpad ThinkLight™	UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup>	<b>14.0W" (WxDxH):</b> 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm <b>3-cell:</b> from 4.08 lb (1.85kg)		
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type Battery - life <sup>10</sup>	Integrated Li-Polymer 3-cell <b>3-cell (47Whr):</b> up to 7.1 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel UM77 Express Chipset</b> 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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T430-U sheet; For Lenovo service <sup>22</sup> upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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# ThinkPad T430u 3351 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>2</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
3351-3ZU	i7-3517U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	Pro 64	08/12
3351-3YU	i7-3517U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3	Pro 64	08/12
3351-3XU	i7-3517U	4GBx1	14.0" HD	720p	320G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3	Pro 64	08/12
3351-3WU	i3-3217U	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	24GB mSATA	None	No	3	Pro 64	08/12
3351-34U	i5-3317U	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**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream Ultrabook™; one spindle <b>Intel® Core™ i3-3217U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), HT technology <b>Intel Core i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology <b>Intel Core i7-3517U processor (2 cores, 1.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology		<b>Preloaded operating system</b> <sup>20F</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li></ul>
Memory	8GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical	None		
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	<i>Some:</i> mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA GeForce® GT 620M</b> , PCI Express® x16, <b>1GB</b> memory, 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 <sup>13</sup>		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight <sup>2</sup>	<b>3-cell:</b> from 4.12 lb (1.87kg)		
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type	Integrated Li-Polymer 3-cell		
Battery - life <sup>10</sup>	<b>3-cell (47Whr):</b> up to 6.6 hr		
Chipset	<b>Mobile Intel UM77 Express Chipset</b>		
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 <sup>4</sup>	<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, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT 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	<i>Some:</i> AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>	
For compatible accessories, please go to O-T430-U sheet;	
For Lenovo service <sup>22</sup> upgrade options, please go to S-TA sheet	

See footnotes for more detailed information

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# ThinkPad T430u 8614 (Optimus) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>2</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann Date (mm/yy)
8614-3MU	i7-3517U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	Finger	BT	3	Pro 64	08/12
8614-3LU	i7-3517U	4GBx1	14.0" HD	720p	128G SSD	TP 11a/b/g/n	None	Finger	BT	3	Pro 64	08/12
8614-3HU	i5-3317U	4GBx1	14.0" HD	720p	500G 7200	TP 11a/b/g/n	24GB mSATA	None	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**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream Ultrabook™; one spindle</i> <b>Intel® Core™ i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology <b>Intel Core i7-3517U processor (2 cores, 1.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology		<b>Preloaded operating system</b> <sup>20F</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li></ul>
Memory	8GB max <sup>7</sup> / 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	<i>Some:</i> mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA GeForce® GT 620M</b> , PCI Express® x16, <b>1GB</b> 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	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar <sup>13</sup>		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight <sup>2</sup>	<b>3-cell:</b> from 4.12 lb (1.87kg)		
Case material	<i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type	Integrated Li-Polymer 3-cell		
Battery - life <sup>10</sup>	<b>3-cell (47Whr):</b> up to 6.6 hr		
Chipset	<b>Mobile Intel UM77 Express Chipset</b>		
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 <sup>4</sup>	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	<i>Some:</i> AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			
For compatible accessories, please go to O-T430-U sheet; For Lenovo service <sup>22</sup> 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 <sup>8</sup> 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 <b>Intel® Core™ i7-3517U processor (2 cores, 1.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology <b>Intel Core i7-3537U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.1GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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 <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader®  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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 <sup>7</sup> (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	<i>Some:</i> mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA GeForce® GT 620M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm <i>3-cell:</i> from 4.12 lb (1.87kg) <i>Display cover:</i> Aluminum; <i>Bottom:</i> Glass-Fiber Reinforced Plastic		
Battery - type Battery - life <sup>10</sup>	Integrated Li-Polymer 3-cell <i>3-cell (47Whr):</i> up to 6.6 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel UM77 Express Chipset</b> 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 <sup>4</sup>	Two PCI Express Mini Card slots <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 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
			For compatible accessories, please go to O-T430-U sheet;
			For Lenovo service <sup>22</sup> 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 <sup>5</sup> 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	<b>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</b>							<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64					
Memory	8GB max <sup>7</sup> (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							<b>Ready to install applications</b> <sup>14</sup> (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™							<b>Preloaded applications</b> <sup>14</sup> (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	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>												
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm												
Weight <sup>2</sup>	<b>3-cell:</b> 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 <sup>10</sup>	<b>3-cell (47Whr):</b> up to 7.1 hr												
Chipset	<b>Mobile Intel UM77 Express Chipset</b>												
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>a</sup> 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 <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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 <sup>7</sup> (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	<i>Some:</i> mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Widescreen display	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 TrackPoint® pointing device, Internet Scroll Bar <sup>13</sup>		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight <sup>2</sup>	<b>3-cell:</b> 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 <sup>10</sup>	<b>3-cell (47Whr):</b> up to 7.1 hr		
Chipset	<b>Mobile Intel UM77 Express Chipset</b>		
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 <sup>4</sup>	<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™	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	<i>Some:</i> AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, supports the security chip		
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>		
For compatible accessories, please go to O-T430-U sheet; For Lenovo service <sup>22</sup> 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 <sup>2</sup> 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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Mainstream Ultrabook™; one spindle <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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
Memory	8GB max <sup>7</sup> (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	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight <sup>2</sup>	<b>3-cell:</b> 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 <sup>10</sup>	<b>3-cell (47Whr):</b> up to 7.1 hr		
Chipset	<b>Mobile Intel UM77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>5</sup> 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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Mainstream Ultrabook™; one spindle <b>Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology <b>Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Windows® 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security (30 days of virus definitions)</li><li>• Skype™</li></ul>
Memory	8GB max <sup>7</sup> (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	<b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.39" x 9.29" x 0.83"; 340mm x 236mm x 21mm		
Weight <sup>2</sup>	<b>3-cell:</b> 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 <sup>10</sup>	<b>3-cell (47Whr):</b> up to 7.1 hr		
Chipset	<b>Mobile Intel UM77 Express Chipset</b>		
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 <sup>4</sup>	<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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			
For compatible accessories, please go to O-T430-U sheet;			
For Lenovo service <sup>22</sup> 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 <sup>52</sup>	0A34032	ann	04/05/11
USB Numeric Keypad	33L3225	ann	05/01/00
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09

<sup>52</sup> 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 <sup>52</sup>	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](http://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](http://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](http://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](http://www.lenovo.com/support/monitors)

[www.lenovo.com/support/thinkpad/optimus-monitors](http://www.lenovo.com/support/thinkpad/optimus-monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://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 <sup>5</sup> 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 <sup>28</sup>	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	<i>Thin and light enterprise-class Ultrabook™; one spindle</i> <b>Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology <b>Intel Core i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology <b>Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology								<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit					
Memory	12GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket								<b>Preloaded applications<sup>5</sup></b> (only some listed)					
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™								- <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader®					
M.2 SSD	<i>Some:</i> M.2 Solid State Drive (SSD), via M.2 Card slot								- <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch					
Widescreen display	<b>14.0"</b> (355mm) <b>HD+</b> ( <b>1600x900</b> ) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio								- <b>All models</b> • 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					
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus													
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>3</sup> Weight <sup>2</sup> Case color Case material	<b>14.0W"</b> (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm <i>3-cell:</i> 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 <sup>10</sup>														
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <i>Some:</i> Wireless WAN upgradable None Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel 82579LM Gigabit Network Connection (Hanksville), 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 / dual array microphone, combo audio/microphone 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 the keyboard bezel, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Security Security chip Fingerprint reader														
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available								Supports ThinkVantage® technologies  45-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>9</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology <b>Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Skype™</li><li>• Amazon Kindle</li><li>• Nitro Pro</li><li>• PC Device Stage</li><li>• Evernote</li></ul>
Memory	12GB max <sup>7</sup> / 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	<b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>3</sup>	<i>14.0W" (WxDxH):</i> 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm		
Weight <sup>2</sup>	<i>3-cell:</i> 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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		
Supports ThinkVantage® technologies			
45-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			
For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet			

See footnotes for more detailed information

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# ThinkPad T431s 20AC (Onsite)

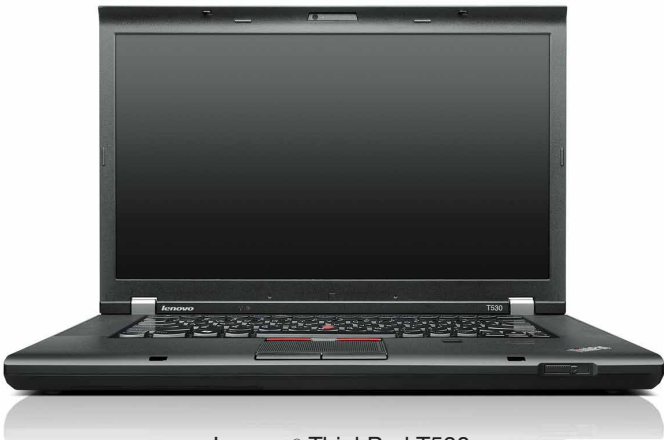
Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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	Win7 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	<i>Thin and light enterprise-class Ultrabook™; one spindle</i> <b>Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology <b>Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology									<b>Preloaded operating system<sup>20</sup></b> - <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  <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader®  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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 <sup>7</sup> / 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	<b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm													
Weight <sup>2</sup>	<b>3-cell:</b> 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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>													
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available									For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				

See footnotes for more detailed information

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Lenovo® ThinkPad T530



Lenovo ThinkPad T530



Lenovo ThinkPad T530



Lenovo ThinkPad T530



Lenovo ThinkPad T530



Lenovo ThinkPad T530

# ThinkPad T530 2359 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> 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<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>
		For compatible accessories, please go to O-T530 sheet; For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

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# ThinkPad T530 2359 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	16GB max <sup>7</sup> / 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										<b>Preloaded applications<sup>5</sup></b> (only some listed) - <b>Windows 7 models</b> • 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) - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - <b>All models</b> • 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W" (WxDxH):</b> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 (Lewistown), 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 None														
Security Security chip Fingerprint reader	None None None														
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup> For compatible accessories, please go to O-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				

See footnotes for more detailed information

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# ThinkPad T530 2392 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <sup>28</sup>	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	<b>Premiere performance; two spindles</b> <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <b>Maximum external resolution:</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions																
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W"</b> (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <b>6-cell:</b> starting at 5.39 lb (2.45kg); <b>9-cell:</b> starting at 5.76 lb (2.62kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Glass-fiber reinforced plastic without paint																
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 9.1 hr; <b>9-cell (94Whr):</b> up to 15.3 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 30.6 hr																
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 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 AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip																
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available																

See footnotes for more detailed information

# ThinkPad T530 2392 (TopSeller) - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>		

See footnotes for more detailed information

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(KN4-8) October 2012



# ThinkPad T530 2392 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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-ARU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	Backlit	Intel 6205 <sup>28</sup>	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> <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000</b> , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - <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 <b>Preloaded applications<sup>5</sup></b> (only some listed)				
Memory	16GB max <sup>7</sup> / 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										<b>- Windows 7 models</b> • 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 <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										<b>- Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)				
mSATA™ SSD	None										<b>- All models</b> • 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™				
Widescreen display	<i>Some:</i> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 3000 or 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W" (WxDxH):</b> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <b>6-cell:</b> starting at 5.39 lb (2.45kg); <b>9-cell:</b> starting at 5.76 lb (2.62kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Glass-fiber reinforced plastic without paint														
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 9.1 hr; <b>9-cell (94Whr):</b> up to 15.3 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 30.6 hr														
Chipset ExpressCard Smart Card Reader Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
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-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>														

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 <sup>3</sup> 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 <sup>28</sup>	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	<b>Premiere performance; two spindles</b> <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Intel Small Business Advantage</li><li>• RapidBoot HDD Accelerator</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 3000</b> or <b>4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>22</sup> upgrade options, please go to QP-TA sheet
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>9</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-2520M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 3000</b> , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit
Memory	16GB max <sup>7</sup> / 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										<b>Preloaded applications<sup>5</sup></b> (only some listed) <b>- Windows 7 models</b> <ul style="list-style-type: none"> <li>• Lenovo® Message Center Plus</li> <li>• ThinkVantage Product Recovery</li> <li>• Access Connections™</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo SimpleTap</li> <li>• Adobe® Reader®</li> <li>• Corel® WinDVD® (DVD±RW)</li> <li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li> <li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li> </ul> <b>- Windows 8 models</b> <ul style="list-style-type: none"> <li>• Lenovo Support</li> <li>• Lenovo Companion</li> <li>• Lenovo QuickLaunch</li> <li>• PC Device Stage</li> <li>• Cyberlink Power2Go (DVD±RW)</li> <li>• Cyberlink PowerProducer (DVD±RW)</li> </ul> <b>- All models</b> <ul style="list-style-type: none"> <li>• Lenovo Solution Center</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• Fingerprint Software (fingerprint models)</li> <li>• Lenovo Cloud Storage by SugarSync</li> <li>• Microsoft® Office preloaded; purchase a product key to activate</li> <li>• Norton™ Internet Security (30 days of virus definitions)</li> <li>• Skype™</li> </ul>
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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 3000</b> or <b>4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W" (WxDxH):</b> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <b>6-cell:</b> starting at 5.73 lb (2.60kg); <b>9-cell:</b> starting at 6.10 lb (2.77kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Glass-fiber reinforced plastic without paint										
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 7.7 hr; <b>9-cell (94Whr):</b> up to 12.8 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 25.6 hr										
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <i>Some:</i> 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™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>										For compatible accessories, please go to O-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

See footnotes for more detailed information



Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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	<b>9</b>	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> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W" (WxDxH):</b> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>22</sup> upgrade options, please go to QP-TA sheet
Limited warranty <sup>12</sup> <b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>3</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass		
ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<b>15.6W"</b> (WxDxH): 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm		
Weight <sup>2</sup>	<i>6-cell:</i> starting at 5.39 lb (2.45kg); <i>9-cell:</i> starting at 5.76 lb (2.62kg)		
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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>		
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 <sup>4</sup>	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™	<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	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	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, Power On Authentication, supports the security chip		
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
For compatible accessories, please go to O-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

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 <sup>8</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions <sup>3</sup>	<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 <sup>2</sup>	<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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>												
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup> For compatible accessories, please go to O-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>9</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - <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  <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li><li>• Corel® WinDVD® (DVD±RW)</li><li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li><li>• PC Device Stage</li><li>• Cyberlink Power2Go (DVD±RW)</li><li>• Cyberlink PowerProducer (DVD±RW)</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Skype™</li></ul>
Memory	16GB max <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W"</b> (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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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		
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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>		

See footnotes for more detailed information

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(KN4-13) December 2012

# ThinkPad T530 2429 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Smart Card Reader	Finger print reader	Bat-Blue-tooth	Global (G) Intel vPro	Ann Date (mm/yy)
2429-5UU	i5-3320M	4GBx1	15.6" HD+	720p	180G SSD	None	Intel 6205 <sup>28</sup>	upg	None	None	Finger	BT 6 vPro	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	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	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	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	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	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	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	Pro 64 07/12

• Some models are part of the Global Models Plus program with limited onsite service<sup>24</sup> 3-year limited warranty

Positioning Processor	<b>Premiere performance; two spindles</b> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W" (WxDxH):</b> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <b>6-cell:</b> starting at 5.39 lb (2.45kg); <b>9-cell:</b> starting at 5.76 lb (2.62kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Glass-fiber reinforced plastic without paint										
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 9.1 hr; <b>9-cell (94Whr):</b> up to 15.3 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 30.6 hr										
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup> For compatible accessories, please go to O-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>5</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed) - <b>Windows 7 models</b> • 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) - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - <b>All models</b> • 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 <sup>7</sup> / 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>														
Chipset ExpressCard Smart Card Reader Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup> For compatible accessories, please go to O-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet			

See footnotes for more detailed information

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(KN4-14) December 2012



# ThinkPad T530 2429 (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000.</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T530 sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>3</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Premiere performance; two spindles <b>Intel® Core™ i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> / 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: <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA NVS™ 5400M</b> , PCI Express® x16, <b>1GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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		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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-T530 sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet
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 <sup>12</sup>	3-years/1-year battery, <b>limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

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# ThinkPad T530i 2359 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> rpm	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload (mm/yy)	Ann Date
2359-2AU	i3-2370M	4GBx1	15.6" HD	720p	500G 7200	None	Intel 2200	WWAN upg	None	None	None	6	None	Pro 64	06/12
2359-29U	i3-2370M	4GBx1	15.6" HD	720p	320G 7200	None	Intel 2200	WWAN upg	None	None	None	6	None	Pro 64	06/12

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i3-2370M processor (2 cores, 2.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>15.6"</b> (396mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>Intel HD Graphics 3000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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		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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>12</sup>	1-year - depot repair service / service upgrades <sup>22</sup> available		For compatible accessories, please go to O-T530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-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 <sup>41</sup>	0A65631	ann 06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD <sup>41</sup>	0A65632	ann 06/05/12
1TB 5400rpm SATA 3.0Gb/s 9.5mm 4K HDD <sup>41</sup>	0A65633	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD <sup>41</sup>	0A65635	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm		
Self Encrypting (SED) OPAL Capable HDD <sup>41</sup>	0A65636	ann 08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive <sup>41</sup>	0A65629	ann 06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive <sup>41</sup>	0A65630	ann 06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD <sup>41</sup>	0A65620	ann 05/15/12

<sup>41</sup> 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 <sup>62</sup>	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 <sup>62</sup>	433715U	ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W <sup>62</sup>	433815U	ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W	433835U	ann 06/05/12

<sup>62</sup> Compatible only with dual core models.

## Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
Ultralim Plus Wireless Keyboard and Mouse <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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) <sup>43</sup>	0A36304	ann 06/05/12

<sup>43</sup> 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 <sup>44</sup>	40Y7625	ann 09/20/05
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<sup>44</sup> Requires the *ThinkPad 90W AC Adapter* 40Y7659 or the adapter provided with the system.

More information at [www.lenovo.com/alldaycomputing](http://www.lenovo.com/alldaycomputing)

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

<sup>45</sup> Only compatible with the integrated graphics models.

<sup>62</sup> Compatible only with dual core models.

More info at [www.lenovo.com/support/poweradapters](http://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](http://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](http://www.lenovo.com/support/cases)

## Monitors

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

<sup>69</sup> 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](http://www.lenovo.com/support/monitors)  
[www.lenovo.com/support/thinkpad/optimus-monitors](http://www.lenovo.com/support/thinkpad/optimus-monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



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 <sup>8</sup> rpm	RAID	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Smart Card Reader	Color calib	Battery Intel cells vPro	Preload (mm/yy)	Ann Date
2438-2MU	i7-3920XM	4GBx4	15.6" FHD	K2000M	1x500G 7200	No	None	Intel 6205 <sup>28</sup>	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	<b>Mobile workstation; two spindles</b> <b>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</b> <b>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</b> <b>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</b> <b>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</b> <b>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</b> <b>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</b>										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup> (only some listed)</b> • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup> (only some listed)</b> • 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	<b>dual-core model:</b> 16GB max <sup>7</sup> , two 204-pin SO-DIMM sockets <b>quad-core model:</b> 32GB max, four 204-pin SO-DIMM sockets <b>All:</b> 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 <b>Some:</b> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <b>Some:</b> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <b>All:</b> removable, upgradable, supports the second disk, Shock Mounted Hard Drive													
mSATA™ SSD	None													
Widescreen display	<b>Some:</b> 15.6" (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <b>Some:</b> 15.6" (396mm) <b>Full HD (1920x1080) color</b> , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut													
Color calibration Camera	<b>Some:</b> 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA Quadro® K1000M or K2000M</b> , PCI Express® x16, <b>2GB</b> memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <b>Maximum external resolution:</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Battery - life <sup>10</sup>	<b>15.6W" (WxDxH):</b> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <b>6-cell:</b> starting at 5.76 lb (2.62kg); <b>9-cell:</b> starting at 6.19 lb (2.81kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Glass-fiber reinforced plastic w/o paint Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 7.7 hr; <b>9-cell (94Whr):</b> up to 12.8 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 25.6 hr													
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> One slot (ExpressCard/34) <b>Some:</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>										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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-W530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet; For ISV certifications, please visit <a href="http://www.lenovo.com/support/ISV">www.lenovo.com/support/ISV</a>			

See footnotes for more detailed information



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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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	iAMT vPro	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 <b>Intel® Core™ i7-3630QM processor (4 cores, 2.40GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology <b>Intel Core i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology <b>Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed)
Memory	<i>dual-core model:</i> 16GB max <sup>7</sup> , 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> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA Quadro® K1000M or K2000M</b> , PCI Express® x16, <b>2GB</b> 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)	<b>Windows 7 models</b> • 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) <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) <b>All models</b> • 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™
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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 Power On Authentication, supports the security chip	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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Security Security chip Fingerprint reader		For compatible accessories, please go to O-W530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet; For ISV certifications, please visit <a href="http://www.lenovo.com/support/ISV">www.lenovo.com/support/ISV</a>
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>	

See footnotes for more detailed information

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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB <sup>5</sup> 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	Mobile workstation; two spindles <b>Intel® Core™ i7-3630QM processor (4 cores, 2.40GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology <b>Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> , 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: <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA Quadro® K1000M or K2000M</b> , PCI Express® x16, <b>2GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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) Some: 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 <sup>4</sup> 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 Some: 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		
Security Security chip Fingerprint reader	Power On Authentication, supports the security chip Some: AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> 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 <sup>5</sup> 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 <sup>28</sup>	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 <sup>28</sup>	upg	None	9	vPro		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		Pro 64	06/12
2441-2GU	i7-3720QM	4GBx1	15.6" FHD	K1000M	1x500G 7200	No	DVD±RW	None	Intel 6205	upg	Finger	9	vPro		Pro 64	06/12
2441-23U	i7-3820QM	4GBx2	15.6" FHD	K2000M	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+	K1000M	1x320G 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		Pro 64	02/13
Positioning Processor	<i>Mobile workstation; two spindles</i> <b>Intel® Core™ i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology <b>Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology <b>Intel Core i7-3820QM processor (4 cores, 2.70GHz, 8MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology <b>Intel Core i7-3840QM processor (4 cores, 2.80GHz, 8MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> , 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> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA Quadro® K1000M or K2000M</b> , PCI Express® x16, <b>2GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions															
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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															
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											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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
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-W530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet; For ISV certifications, please visit <a href="http://www.lenovo.com/support/ISV">www.lenovo.com/support/ISV</a>				
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available															

See footnotes for more detailed information

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# ThinkPad W530 2441 (Optimus) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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
2441-55U	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	<b>Mobile workstation; two spindles</b> <b>Intel® Core™ i7-3720QM processor (4 cores, 2.60GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology <b>Intel Core i7-3740QM processor (4 cores, 2.70GHz, 6MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology <b>Intel Core i7-3820QM processor (4 cores, 2.70GHz, 8MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology <b>Intel Core i7-3840QM processor (4 cores, 2.80GHz, 8MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.80GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - <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 <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • 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)  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW)  - <b>All models</b> • 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 <sup>7</sup> , 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> <b>15.6"</b> (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> <b>15.6"</b> (396mm) <b>Full HD (1920x1080) color</b> , 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	<b>NVIDIA® Optimus™</b> technology, auto-switch between discrete and integrated graphics, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA Quadro® K1000M</b> or <b>K2000M</b> , PCI Express® x16, <b>2GB</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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		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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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-W530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet; For ISV certifications, please visit <a href="http://www.lenovo.com/support/ISV">www.lenovo.com/support/ISV</a>
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

# ThinkPad W530 2447 (Optimus) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB <sup>8</sup> rpm	RAID	SATA optical	Backlit key-board	PCIe Mini Card WLAN	Finger print reader	Color calib	Bat-tery cells	Global (G) Intel 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 <sup>28</sup>	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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty
- Power-packed engineering with Open GL graphics and ISV certifications

Positioning Processor	<b>Mobile workstation; two spindles</b> <b>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</b> <b>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</b> <b>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</b>										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> </ul>						
Memory	<b>dual-core model:</b> 16GB max <sup>7</sup> , two 204-pin SO-DIMM sockets <b>quad-core model:</b> 32GB max, four 204-pin SO-DIMM sockets <b>All:</b> PC3-12800 1600MHz DDR3, non-parity, dual-channel capable										<b>Preloaded applications<sup>14</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• Lenovo® Solution Center</li> <li>• Lenovo Message Center Plus</li> <li>• ThinkVantage Product Recovery</li> <li>• Access Connections™</li> <li>• Fingerprint Software (fingerprint models)</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo Cloud Storage by SugarSync</li> <li>• Lenovo SimpleTap</li> <li>• Microsoft® Office preloaded; purchase a product key to activate</li> <li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Evernote®</li> <li>• Intel Small Business Advantage</li> <li>• RapidBoot HDD Accelerator</li> <li>• Symantec™ VIP</li> <li>• Windows Live™ Essentials</li> <li>• Corel® WinDVD® (DVD±RW)</li> <li>• Corel Burn.Now™ Lenovo Edition (DVD±RW)</li> <li>• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li> <li>• X-Rite® Pantone® Color Calibrator (color calibration models)</li> </ul>						
Optical Ultrabay SATA disk	<b>Some:</b> DVD burner, 12.7mm Ultrabay Enhanced, removable <b>One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access</b> <b>Some:</b> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <b>Some:</b> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <b>All:</b> removable, upgradable, supports the second disk, Shock Mounted Hard Drive																
mSATA™ SSD	None																
Widescreen display	<b>Some:</b> 15.6" (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <b>Some:</b> 15.6" (396mm) <b>Full HD (1920x1080) color</b> , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut																
Color calibration Camera	<b>Some:</b> Pantone® color calibrator by X-Rite® color calibration sensor in palm rest, LED indicator <b>HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus</b>																
Graphics	<b>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;</b> <b>Maximum external resolution:</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions																
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W" (WxDxH):</b> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <b>6-cell:</b> starting at 5.76 lb (2.62kg); <b>9-cell:</b> starting at 6.19 lb (2.81kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Glass-fiber reinforced plastic without paint																
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 7.7 hr; <b>9-cell (94Whr):</b> up to 12.8 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 25.6 hr																
Chipset ExpressCard Smart Card Read Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	Two PCI Express Mini Card slots <b>Some:</b> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <b>Some:</b> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3																
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 <b>Some:</b> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip																
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> available										For compatible accessories, please go to O-W530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet; For ISV certifications, please visit <a href="http://www.lenovo.com/support/ISV">www.lenovo.com/support/ISV</a>						

See footnotes for more detailed information

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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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	<b>Mobile workstation; two spindles</b> <b>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</b> <b>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</b> <b>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</b> <b>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</b>										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup> (only some listed)</b> - <b>Windows 7 models</b> • 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) - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage • Cyberlink Power2Go (DVD±RW) • Cyberlink PowerProducer (DVD±RW) - <b>All models</b> • 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	<b>dual-core model:</b> 16GB max <sup>7</sup> , two 204-pin SO-DIMM sockets <b>quad-core model:</b> 32GB max, four 204-pin SO-DIMM sockets <b>All:</b> PC3-12800 1600MHz DDR3, non-parity, dual-channel capable														
Optical Ultrabay SATA disk	<b>Some:</b> DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <b>Some:</b> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <b>Some:</b> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <b>All:</b> removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	<b>Some:</b> 15.6" (396mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <b>Some:</b> 15.6" (396mm) <b>Full HD (1920x1080) color</b> , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration Camera	<b>Some:</b> 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, <b>Intel HD Graphics 4000</b> in processor, and <b>NVIDIA Quadro® K1000M or K2000M</b> , PCI Express® x16, <b>2GB</b> memory, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports three independent displays; <b>Maximum external resolution:</b> 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 <sup>13</sup> , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material	<b>15.6W" (WxDxH):</b> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <b>6-cell:</b> starting at 5.76 lb (2.62kg); <b>9-cell:</b> starting at 6.19 lb (2.81kg) <b>Display cover:</b> Carbon-fiber / Glass-fiber hybrid; <b>Bottom:</b> Glass-fiber reinforced plastic without paint														
Battery - type Battery - life <sup>10</sup>	Lithium Ion 6-cell or 9-cell, supports optional Slice battery as 2nd battery, HW Authentication <b>6-cell (57Whr):</b> up to 7.7 hr; <b>9-cell (94Whr):</b> up to 12.8 hr; <b>9-cell plus 9-cell Slice battery (94Whr, 0A36304):</b> up to 25.6 hr														
Chipset ExpressCard Smart Card Reader Multicard Reader Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup> For compatible accessories, please go to O-W530 sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet; For ISV certifications, please visit <a href="http://www.lenovo.com/support/ISV">www.lenovo.com/support/ISV</a>				

See footnotes for more detailed information

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

<sup>41</sup> 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
Ultralim Plus Wireless Keyboard and Mouse <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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) <sup>43</sup>	0A36304	ann	06/05/12

<sup>43</sup> 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 <sup>44</sup>	40Y7625	ann	09/20/05
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<sup>44</sup> Requires the ThinkPad 90W AC Adapter  
40Y7659 or the adapter provided with the system.

More information at [www.lenovo.com/alldaycomputing](http://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](http://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](http://www.lenovo.com/support/cases)

## Monitors

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

<sup>69</sup> 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](http://www.lenovo.com/support/monitors)  
[www.lenovo.com/support/thinkpad/optimus-monitors](http://www.lenovo.com/support/thinkpad/optimus-monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e



Lenovo ThinkPad X131e

# ThinkPad X131e 3368 (Intel) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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)
3368-2DU	Cel 877	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3368-2EU	Cel 877	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3368-2GU	Cel 877	4GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3368-2HU	Cel 877	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3368-2JU	i3-2367M	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	07/12
3368-2KU	i3-2367M	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3368-2LU	i3-2367M	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3368-2MU	i3-2367M	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000 select	Black	None	BT	6	Pro 64	07/12	
3368-33U	i3-2367M	4GBx1	11.6" HD	720p	320G 7200	Intel 2230	WWAN upg	None	Black	None	BT	6	Pro 64	09/12
3368-2XU	Cel 877	4GBx1	11.6" HD	720p	320G 7200	Intel 2230	WWAN upg	None	Black	None	BT	6	Pro 64	09/12
3368-2VU	Cel 877	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	09/12
3368-2TU	i3-2367M	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	09/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle <b>Intel® Celeron® 877 processor (2 cores, 1.40GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1333MHz)</b> <b>Intel Core™ i3-2367M processor (2 cores, 1.40GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Hyper-Threading technology</b>										<b>Preloaded operating system<sup>20</sup></b> Some: Genuine Windows® 7 Home Premium 64 Some: Genuine Windows 7 Professional 64			
Memory	8GB max <sup>7</sup> / 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										<b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager			
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™										<b>Preloaded applications<sup>14</sup></b> (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 • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • Symantec™ VIP • Windows Live™ Essentials • Microsoft® Office 2010 preloaded; purchase product key to activate			
mSATA™ SSD	None													
Widescreen display	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics or Intel HD Graphics 3000</b> 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 <sup>13</sup>													
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions <sup>3</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm													
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr													
Chipset	<b>Mobile Intel HM77 Express Chipset</b>													
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 <sup>4</sup>	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 Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 2230, 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													
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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available													

See footnotes for more detailed information

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# ThinkPad X131e 3368 (Intel) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <b>Intel® Celeron® 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1600MHz)</b>		<b>Preloaded operating system</b> <sup>20</sup> - Genuine Windows® 7 Home Premium 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics</b> 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 <sup>13</sup>		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm		
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr		
Chipset	<b>Mobile Intel HM77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

			Supports ThinkVantage® technologies
			65-watt AC Adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 6.0-compliant (except Celeron models) GREENGUARD® certified (except Celeron models) ROHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>
			For compatible accessories, please go to O-X131-E sheet; For Lenovo service<sup>22</sup> upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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(JT1-7) June 2014

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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue- tery tooth cells	Preload	Ann Date (mm/yy)
3368-3HU	i3-3227U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64 10/12
3368-3GU	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64 10/12
3368-3DU	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64 10/12
3368-3CU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64 10/12
3368-3BU	Cel 887	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64 10/12
3368-3AU	i3-2365M	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64 10/12
3368-39U	i3-2365M	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64 10/12
3368-38U	Cel 887	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64 10/12
3368-32U	i3-2367M	4GBx1	11.6" HD	720p	320G 7200	Intel 2230	WWAN upg	None	Black	None	BT	6	Win8 Pro64 10/12
3368-2ZU	Cel 877	4GBx1	11.6" HD	720p	320G 7200	Intel 2230	WWAN upg	None	Black	None	BT	6	Win8 Pro64 10/12
3368-2YU	i3-2367M	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64 10/12
3368-2WU	Cel 877	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64 10/12
3368-2UU	Cel 877	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64 10/12
3368-2SU	i3-2367M	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win8 Pro64 10/12
Positioning Processor	<i>Entry ultraportable for excellent usability and reliability; one spindle</i> <b>Intel® Celeron® 877 processor (2 cores, 1.40GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1333MHz)</b> <b>Intel Celeron 887 processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1333MHz)</b> <b>Intel Celeron 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1600MHz)</b> <b>Intel Core™ i3-2365M processor (2 cores, 1.40GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Hyper-Threading technology</b> <b>Intel Core i3-2367M processor (2 cores, 1.40GHz, 3MB cache), Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Hyper-Threading technology</b> <b>Intel Core i3-3227U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology</b>									<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup> (only some listed)</b> - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader® • Microsoft® Office 2010 preloaded; purchase product key to activate - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • Microsoft® Office 2013 preloaded; purchase product key to activate • PC Device Stage - <b>All models</b> • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Norton™ Internet Security (30 days of virus definitions) • Skype™			
Memory	8GB max <sup>7</sup> / 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) 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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics, Intel HD Graphics 3000, or Intel HD Graphics 4000</b> 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 <sup>13</sup>												
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch												
ThinkLight™	None												
Dimensions <sup>3</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm												
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr												
Chipset	<b>Mobile Intel HM77 Express Chipset</b>												
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									<b>Supports ThinkVantage® technologies</b>  65-watt AC Adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 6.0-compliant (except Celeron models) GREENGUARD® certified (except Celeron models) ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-X131-E sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to S-TA sheet			
PCIe WLAN <sup>4</sup>	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	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												
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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available												

See footnotes for more detailed information

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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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
3368-5DU	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 <b>Intel® Celeron® 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1600MHz) <b>Intel Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - <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  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch • PC Device Stage  - <b>All models</b> • 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 <sup>7</sup> / 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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics</b> or <b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm		
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr		
Chipset	<b>Mobile Intel HM77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

Supports ThinkVantage® technologies		
65-watt AC Adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 6.0-compliant (except Celeron models) GREENGUARD® certified (except Celeron models) ROHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>		
For compatible accessories, please go to O-X131-E sheet;		
For Lenovo service<sup>22</sup> upgrade options, please go to S-TA sheet		

See footnotes for more detailed information



# ThinkPad X131e 3367 (Intel)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload (mm/yy)	Ann Date
3367-2ZU	Cel 877	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3367-32U	Cel 877	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3367-33U	Cel 877	4GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3367-34U	Cel 877	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3367-35U	i3-2367M	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Prem 64	07/12
3367-36U	i3-2367M	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3367-37U	i3-2367M	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3367-38U	i3-2367M	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Pro 64	07/12
3367-3AU	i3-2367M	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Pro 64	07/12

## • Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle <b>Intel® Celeron® 877 processor (2 cores, 1.40GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1333MHz) <b>Intel Core™ i3-2367M processor (2 cores, 1.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Hyper-Threading technology	<b>Preloaded operating system<sup>20</sup></b> Some: Genuine Windows® 7 Home Premium 64 Some: Genuine Windows 7 Professional 64
Memory	8GB max <sup>7</sup> / 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	<b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager
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™	<b>Preloaded applications<sup>14</sup></b> (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 • Norton™ Internet Security 2012 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Evernote® • Intel Small Business Advantage • Symantec™ VIP • Windows Live™ Essentials • Microsoft® Office 2010 preloaded; purchase product key to activate
mSATA™ SSD	None	
Widescreen display	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics</b> or <b>Intel HD Graphics 3000</b> 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 <sup>13</sup>	
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions <sup>3</sup>	<b>11.6W"</b> (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm	
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr	
Chipset	<b>Mobile Intel HM77 Express Chipset</b>	
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 <sup>4</sup>	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	
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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information

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(JT1-2) June 2014

# ThinkPad X131e 3367 (Intel) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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)
3367-8CU	i3-3227U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3367-8BU	Cel 1007U	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3367-86U	i3-3227U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3367-85U	Cel 1007U	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	Gobi 3000	select	Black	None	BT	6	Win7 Pro64	10/12
3367-84U	i3-2365M	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3367-83U	i3-2365M	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3367-82U	Cel 887	4GBx1	11.6" HD	720p	128G SSD	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3367-7ZU	Cel 887	4GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	10/12
3367-8TU	i3-2365M	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	12/12
3367-83U	i3-2365M	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	12/12
3367-8RU	Cel 887	4GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	12/12
3367-8QU	Cel 887	2GBx1	11.6" HD	720p	320G 7200	TP 11a/b/g/n	WWAN upg	None	Black	None	BT	6	Win7 Pro64	12/12
3367-8PU	Cel 887	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	No	6	Win7 Pro64	12/12
3367-8NU	i3-2365M	2GBx1	11.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Black	None	No	6	Win8 64	12/12
Positioning Processor	<p><i>Entry ultraportable for excellent usability and reliability; one spindle</i></p> <p><b>Intel® Celeron® 887 processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1333MHz)</p> <p><b>Intel Celeron 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics,</b> DDR3 memory controller (up to 1600MHz)</p> <p><b>Intel Core™ i3-2365M processor (2 cores, 1.40GHz, 3MB cache), Intel HD Graphics 3000,</b> DDR3 memory controller (up to 1333MHz), Hyper-Threading technology</p> <p><b>Intel Core i3-3227U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), HT technology</p>										<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit</li> <li>- Some: Windows 8 64-bit</li> </ul> <p><b>Preloaded applications<sup>5</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>- <b>Windows 7 models</b> <ul style="list-style-type: none"> <li>• Lenovo® Message Center Plus</li> <li>• ThinkVantage Product Recovery</li> <li>• Access Connections™</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo SimpleTap</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> </ul> </li> <li>- <b>Windows 8 models</b> <ul style="list-style-type: none"> <li>• Lenovo Support</li> <li>• Lenovo Companion</li> <li>• Lenovo QuickLaunch</li> <li>• Microsoft® Office 2013 preloaded; purchase product key to activate</li> </ul> </li> <li>- <b>All models</b> <ul style="list-style-type: none"> <li>• Lenovo Solution Center</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• Fingerprint Software (fingerprint models)</li> <li>• Lenovo Cloud Storage by SugarSync</li> <li>• Skype™</li> </ul> </li> </ul>			
Memory	<p>8GB max<sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets</p> <p>* System automatically clocks down for processors with 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><b>11.6" (295mm) HD (1366x768) TFT color,</b> 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><b>Intel HD Graphics, Intel HD Graphics 3000, or Intel HD Graphics 4000</b> 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: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i></p>													
Keyboard	6-row, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar <sup>13</sup>													
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions <sup>3</sup>	<p><b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm</p>													
Weight <sup>2</sup>	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 <sup>10</sup>	6-cell (62.4Whr): up to 8.5 hr													
Chipset	<b>Mobile Intel HM77 Express Chipset</b>													
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 <sup>4</sup>	<p>Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1</p> <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> <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>													
PCIe WWAN	<p>Some: User selectable, AT&amp;T®, Verizon®, or Sprint®, contract required with service provider</p> <p>None</p>													
Carrier Modem	None													
Bluetooth™	Some: Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter													
Ethernet	Realtek® RTL8111F Gigabit Network Connection													
Intel AMT	None													
Audio support	<p>HD Audio, Realtek ALC3202 codec, Dolby® Advanced Audio™ v2 / stereo speakers, 2 watt x 2 / monaural digital microphone, combo audio/mic jack</p> <p>Power-on password, hard disk password, supervisor password, security keyhole</p>													
Security	Trusted Platform Module, TCG 1.2-compliant													
Security chip	None													
Fingerprint reader	None													
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available										<p>For compatible accessories, please go to O-X131-E sheet;</p> <p>For Lenovo service<sup>22</sup> upgrade options, please go to S-TA sheet</p>			

See footnotes for more detailed information

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(JT1-4) June 2014

# ThinkPad X131e 3367 (Intel) - Windows 8 - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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 <b>Intel® Celeron® 1007U processor (2 cores, 1.50GHz, 2MB cache), Intel HD Graphics, DDR3 memory controller (up to 1600MHz)</b> <b>Intel Core™ i3-3227U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), HT technology</b>		<b>Preloaded operating system<sup>20</sup></b> - <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  <b>Preloaded applications<sup>5</sup> (only some listed)</b>  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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 <sup>7</sup> / 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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics</b> or <b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm		
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr		
Chipset	<b>Mobile Intel HM77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

			Supports ThinkVantage® technologies
			65-watt AC Adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 6.0-compliant (except Celeron models) GREENGUARD® certified (except Celeron models) ROHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>
			For compatible accessories, please go to O-X131-E sheet;
			For Lenovo service<sup>22</sup> upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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(JT1-6) June 2014



# ThinkPad X131e 3372 (AMD) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>o</sup> 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
3372-2EU	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 <b>AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache)</b> , integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz) <b>AMD Accelerated Processor E1-1200 (2 cores, 1.40GHz, 1MB L2 cache)</b> , integrated AMD Radeon HD 7310 Graphics, integrated DDR3 memory controller (up to 1066MHz) <b>AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache)</b> , integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)	<b>Preloaded operating system<sup>20</sup></b> Some: Genuine Windows® 7 Home Premium 64 Some: Genuine Windows 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager
Memory	8GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, two 204-pin SO-DIMM sockets * System clocks down for processors with 1066MHz or 1333MHz DDR3 memory controller	<b>Preloaded applications<sup>14</sup></b> (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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>AMD Radeon HD 6310, 7310, or 7340 graphics</b> 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 <sup>13</sup>	
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions <sup>3</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm	
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr	
Chipset	<b>AMD A68M FCH Chipset</b>	
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 <sup>4</sup>	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® 6.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>22</sup> upgrade options, please go to S-TA sheet
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information

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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 <sup>8</sup> 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
3372-2VU	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
3372-3VU	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
3372-3JU	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
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><i>Entry ultraportable for excellent usability and reliability; one spindle</i></p> <p><b>AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache),</b> integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)</p> <p><b>AMD Accelerated Processor E1-1200 (2 cores, 1.40GHz, 1MB L2 cache),</b> integrated AMD Radeon HD 7310 Graphics, integrated DDR3 memory controller (up to 1066MHz)</p> <p><b>AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache),</b> integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)</p>									<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit</li> <li>- Some: Windows 8 64-bit</li> <li>- Some: Windows 8 Pro 64-bit</li> </ul> <p><b>Preloaded applications<sup>5</sup> (only some listed)</b></p> <ul style="list-style-type: none"> <li>- <b>Windows 7 models</b> <ul style="list-style-type: none"> <li>• Lenovo® Message Center Plus</li> <li>• ThinkVantage Product Recovery</li> <li>• Access Connections™</li> <li>• ThinkVantage Power Manager</li> </ul> </li> <li>- <b>Windows 8 models</b> <ul style="list-style-type: none"> <li>• Lenovo Support</li> <li>• Lenovo Companion</li> <li>• Lenovo QuickLaunch</li> </ul> </li> <li>- <b>All models</b> <ul style="list-style-type: none"> <li>• Lenovo Solution Center</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• Fingerprint Software (fingerprint models)</li> <li>• Lenovo Cloud Storage by SugarSync</li> <li>• Microsoft® Office preloaded; purchase a product key to activate</li> <li>• Skype™</li> </ul> </li> </ul>				
Memory	<p>8GB max<sup>7</sup> / 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><b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b>, 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><b>AMD Radeon HD 6310, 7310, or 7340 graphics</b> 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 <sup>13</sup>													
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions <sup>3</sup>	<b>11.6W"</b> (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm													
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr													
Chipset	<b>AMD A68M FCH Chipset</b>													
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 <sup>4</sup>	Some: 11b/g/n, PCle Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter													
PCle WWAN	Some: 11a/b/g/n, PCle Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter													
	Some: Wireless WAN upgradable													
	Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCle 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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available									<p>Supports ThinkVantage® technologies</p> <p>65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup></p> <p>For compatible accessories, please go to O-X131-E sheet;</p> <p>For Lenovo service<sup>22</sup> upgrade options, please go to S-TA sheet</p>				

See footnotes for more detailed information

# ThinkPad X131e 3371 (AMD)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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	Entry ultraportable for excellent usability and reliability; one spindle <b>AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache)</b> , integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz) <b>AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache)</b> , integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)		<b>Preloaded operating system</b> <sup>20</sup> <i>Some:</i> Genuine Windows® 7 Home Premium 64 <i>Some:</i> Genuine Windows 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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
Memory	8GB max <sup>7</sup> / 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) <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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>AMD Radeon HD 6310 or 7340 graphics</b> 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 <sup>13</sup>		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>11.6W"</b> (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm		
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr		
Chipset	<b>AMD A68M FCH Chipset</b>		
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 <sup>4</sup>	<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	<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		
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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

			Supports ThinkVantage® technologies
			65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 6.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>
			For compatible accessories, please go to O-X131-E sheet;
			For Lenovo service<sup>22</sup> upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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(JT11-2) June 2014



# ThinkPad X131e 3371 (AMD) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>9</sup> 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	<p><i>Entry ultraportable for excellent usability and reliability; one spindle</i></p> <p><b>AMD Accelerated Processor E-300 (2 cores, 1.30GHz, 1MB L2 cache),</b> integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)</p> <p><b>AMD Accelerated Processor E1-1200 (2 cores, 1.40GHz, 1MB L2 cache),</b> integrated AMD Radeon HD 7310 Graphics, integrated DDR3 memory controller (up to 1066MHz)</p> <p><b>AMD Accelerated Processor E2-1800 (2 cores, 1.70GHz, 1MB L2 cache),</b> integrated AMD Radeon HD 7340 Graphics, integrated DDR3 memory controller (up to 1333MHz)</p>									<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit</li> <li>- Some: Windows 8 64-bit</li> </ul> <p><b>Preloaded applications<sup>5</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>- <b>Windows 7 models</b> <ul style="list-style-type: none"> <li>• Lenovo® Message Center Plus</li> <li>• ThinkVantage Product Recovery</li> <li>• Access Connections™</li> <li>• ThinkVantage Power Manager</li> </ul> </li> <li>- <b>Windows 8 models</b> <ul style="list-style-type: none"> <li>• Lenovo Support</li> <li>• Lenovo Companion</li> <li>• Lenovo QuickLaunch</li> </ul> </li> <li>- <b>All models</b> <ul style="list-style-type: none"> <li>• Lenovo Solution Center</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• Fingerprint Software (fingerprint models)</li> <li>• Lenovo Cloud Storage by SugarSync</li> <li>• Microsoft® Office preloaded; purchase a product key to activate</li> <li>• Skype™</li> </ul> </li> </ul>				
Memory	8GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, two 204-pin SO-DIMM sockets													
Optical SATA disk	<p>None (use optional USB-based optical drive)</p> <p><i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable</p> <p><i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™</p>													
mSATA™ SSD	None													
Widescreen display	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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><b>AMD Radeon HD 6310, 7310, or 7340 graphics</b> 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:</i> 1920x1080 (VGA or HDMI)</p>													
Keyboard	6-row, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar <sup>13</sup>													
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions <sup>3</sup>	<b>11.6W"</b> (WxDxH): 11.6" x 8.5" x 1.27"; 293.4mm x 216mm x 32.3mm													
Weight <sup>2</sup>	<b>6-cell:</b> 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 <sup>10</sup>	<b>6-cell (62.4Whr):</b> up to 8.5 hr													
Chipset	<b>AMD A68M FCH Chipset</b>													
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 <sup>4</sup>	<p><i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1, Wi-Fi + Bluetooth combo adapter</p> <p><i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad 11a/b/g/n, 2x2, Wi-Fi + BT combo adapter</p> <p><i>Some:</i> Wireless WAN upgradable</p> <p><i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS</p>													
PCIe WWAN	<p>User selectable, AT&amp;T®, Verizon®, or Sprint®, contract required with service provider</p>													
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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available													

See footnotes for more detailed information

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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
Ultralim Plus Wireless Keyboard and Mouse <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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 <sup>44</sup>	40Y7625	ann	09/20/05

<sup>44</sup> Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

More information at [www.lenovo.com/alldaycomputing](http://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](http://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](http://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](http://www.lenovo.com/support/cases)

Lenovo luxury cases at [www.lenovoluxurycases.com](http://www.lenovoluxurycases.com)

## Monitors

ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
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<sup>69</sup> 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](http://www.lenovo.com/support/monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://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 <sup>5</sup> 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 <b>AMD APU E1-2500 (2 cores, 1.40GHz, 1MB L2 cache),</b> integrated AMD Radeon™ HD 8240 Graphics, DDR3L memory controller (up to 1333MHz) <b>AMD APU A4-5000 (4 cores, 1.50GHz, 2MB L2 cache),</b> integrated AMD Radeon HD 8330 Graphics, DDR3L memory controller (up to 1600MHz)										<b>Preloaded operating system<sup>20</sup></b> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 / 8.1 Pro 64-bit		
Memory	8GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, two 204-pin SO-DIMM sockets * System clocks down for processors with 1333MHz DDR3 memory controller										<b>Preloaded applications<sup>5</sup></b> (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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>AMD Radeon HD 8240 or 8330 graphics</b> 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 <sup>13</sup>												
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch												
ThinkLight™	None												
Dimensions <sup>3</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.38"; 293.4mm x 216mm x 35mm												
Weight <sup>2</sup>	<b>6-cell:</b> 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 ( <b>62.4Whr</b> ), HW Authentication												
Battery - life <sup>10</sup>	<b>6-cell:</b> up to 8.5 hr												
Chipset	<b>AMD SoC (System on Chip) platform</b>												
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 <sup>4</sup>	<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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>5</sup> 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 <b>AMD APU E1-2500 (2 cores, 1.40GHz, 1MB L2 cache),</b> integrated AMD Radeon™ HD 8240 Graphics, DDR3L memory controller (up to 1333MHz) <b>AMD APU A4-5000 (4 cores, 1.50GHz, 2MB L2 cache),</b> integrated AMD Radeon HD 8330 Graphics, DDR3L memory controller (up to 1600MHz)	<b>Preloaded operating system</b> <sup>20</sup> - Windows® 8 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• ThinkVantage System Update</li><li>• Lenovo Cloud Storage by SugarSync - Metro</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Intel AppUp®</li><li>• PC Device Stage</li><li>• AccuWeather</li><li>• Amazon Kindle</li><li>• Nitro Pro</li><li>• Evernote®</li><li>• Skype™</li><li>• Rara Streaming</li><li>• Norton Studio</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security (30 days of virus definitions)</li></ul>
Memory	8GB max <sup>7</sup> / 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 Camera	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	<b>AMD Radeon HD 8240 or 8330 graphics</b> 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 TrackPoint® Touch pad ThinkLight™	6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar <sup>13</sup> UltraNav™, buttonless touchpad below keyboard, multi-touch None	
Dimensions <sup>3</sup> Weight <sup>2</sup> Case color Case material Battery - type Battery - life <sup>10</sup>	<b>11.6W" (WxDxH):</b> 11.6" x 8.5" x 1.38"; 293.4mm x 216mm x 35mm <i>6-cell:</i> from 3.92 lb (1.78kg) Midnight black or Heatwave red (top); black bottom Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell ( <i>62.4Whr</i> ), HW Authentication <i>6-cell:</i> up to 8.5 hr	
Chipset Multicard reader Ports	<b>AMD SoC (System on Chip) platform</b> 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0, one powered USB 2.0, VGA, HDMI, ethernet (RJ-45)	
PCIe WLAN <sup>4</sup>	<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	Supports ThinkVantage® technologies
PCIe WWAN Carrier Modem Bluetooth™ Ethernet Audio support	None None None Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Realtek® RTL8111F Gigabit Network Connection 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® 6.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Security Security chip Fingerpring reader	Power-on password, hard disk password, supervisor password, security keyhole None None	
Limited warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available	
	For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet	

See footnotes for more detailed information

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(JT1K-2) November 2013

# ThinkPad X140e 20BM (AMD)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> 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	Entry ultraportable for excellent usability and reliability; one spindle <b>AMD APU E1-2500 (2 cores, 1.40GHz, 1MB L2 cache)</b> , integrated AMD Radeon™ HD 8240 Graphics, DDR3L memory controller (up to 1333MHz) <b>AMD APU A4-5000 (4 cores, 1.50GHz, 2MB L2 cache)</b> , integrated AMD Radeon HD 8330 Graphics, DDR3L memory controller (up to 1600MHz)		<b>Preloaded operating system</b> <sup>20</sup> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• ThinkVantage Product Recovery</li><li>• Rescue and Recovery™</li><li>• ThinkVantage System Update</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Intel AppUp®</li><li>• PC Device Stage</li><li>• Adobe® Reader®</li><li>• Nitro Pro</li><li>• Evernote®</li><li>• Skype™</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security (30 days of virus definitions)</li></ul>
Memory	8GB max <sup>7</sup> / 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	<b>11.6"</b> (295mm) <b>HD (1366x768) TFT color</b> , 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	<b>AMD Radeon HD 8240 or 8330 graphics</b> 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 <sup>13</sup>		
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<i>11.6W" (WxDxH):</i> 11.6" x 8.5" x 1.38"; 293.4mm x 216mm x 35mm		
Weight <sup>2</sup>	<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 <sup>10</sup>	<i>6-cell:</i> up to 8.5 hr		
Chipset	<b>AMD SoC (System on Chip) platform</b>		
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 <sup>4</sup>	<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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available		

| For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet | | |

See footnotes for more detailed information

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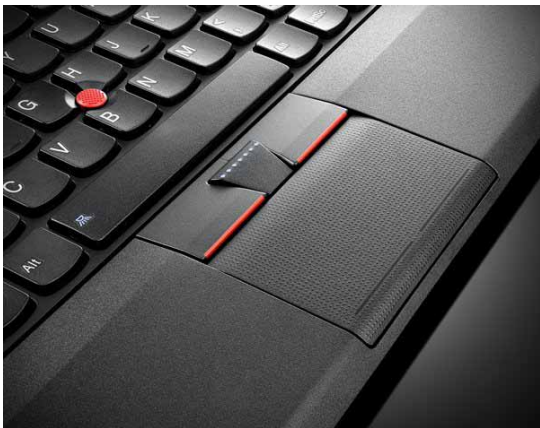
Lenovo® ThinkPad X230



Lenovo ThinkPad X230



Lenovo ThinkPad X230



Lenovo ThinkPad X230



Lenovo ThinkPad X230



Lenovo ThinkPad X230

# ThinkPad X230 (2320) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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
2320-2ZU	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 <sup>28</sup>	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 <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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	<b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup>	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		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
Security Security chip Fingerprint reader			
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades</b> <sup>22</sup> available		65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>

See footnotes for more detailed information

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# ThinkPad X230 (2320) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager			
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Preloaded applications<sup>14</sup></b> (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	<b>12.5" (317.5mm) HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										Supports ThinkVantage® technologies			
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			

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 <sup>2</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									<b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • Lenovo Solution Center • Password Manager • 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									Supports ThinkVantage® technologies				
mSATA™ SSD	None									<b>ThinkPad Ultrabase Series 3</b> • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
Widescreen display	<i>Some:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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													
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup>	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														
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available													

See footnotes for more detailed information

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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3230M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (2 cores, 2.80GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology									<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed) - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch - <b>All models</b> • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate				
Memory	16GB max <sup>7</sup> / 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	<b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions									Supports ThinkVantage® technologies				
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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									<b>ThinkPad Ultrabase Series 3</b> • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
Chipset Ultrabase Multicard reader ExpressCard Smart Card Read Ports	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup>	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														
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available													

See footnotes for more detailed information

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# ThinkPad X230 (2324)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB <sup>5</sup> 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	GMP (P)	Pre-load	Ann date (mm/yy)
2324-4TU	i5-3320M	4GBx1	12.5" HD	180G SSD	Optional	Opt	None	Intel 6205 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (dual-core, 2.80GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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		<b>Supports ThinkVantage® technologies</b>  <b>ThinkPad Ultrabase Series 3</b> • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades</b> <sup>22</sup> available		

See footnotes for more detailed information

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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 <sup>3</sup> rpm	Optical in Ultrabay	ThinkPad Backlit in 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 <sup>28</sup>	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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (dual-core, 2.80GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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  <b>ThinkPad Ultrabase Series 3</b> • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

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# ThinkPad X230 (2324) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit					
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											<b>Preloaded applications<sup>5</sup></b> (only some listed) - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion - <b>All models</b> • 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: <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: (Premium) <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions											<b>ThinkPad Ultrabase Series 3</b> • 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 <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>2</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit  <b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Power Manager  - <b>Windows 8 models</b> • Lenovo Support  - <b>All models</b> • Lenovo Solution Center • Password Manager • Microsoft® Office preloaded; purchase a product key to activate
Memory	16GB max <sup>7</sup> / 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 Camera	<b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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)		<b>Supports ThinkVantage® technologies</b>  <b>ThinkPad Ultrabase Series 3</b>  • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 <i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

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Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i5-3360M processor (dual-core, 2.80GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager				
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Preloaded applications<sup>14</sup></b> (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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass														
ThinkLight™	UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup>	<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 <sup>2</sup>	<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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>														
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 <sup>4</sup>	<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														
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, Power On Authentication, supports the security chip														
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> available														

See footnotes for more detailed information

# ThinkPad X230 (2325) - Onsite - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>a</sup> rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Battery cells	Global (G) Intel vPro	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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty**

Positioning Processor	An ultraportable for the executive on the move; one spindle <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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  Supports ThinkVantage® technologies
Memory	16GB max <sup>7</sup> / 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	(Premium) <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)		<b>ThinkPad Ultrabase Series 3</b> • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass		
ThinkLight™	UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions <sup>3</sup>	<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		
Weight <sup>2</sup>	<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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>		
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	None 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 <sup>4</sup>	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 on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

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

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>5</sup> rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	Finger print reader	Blue-tooth	Bat-tery Intel AMT vPro	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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	An ultraportable for the executive on the move; one spindle <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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														
Graphics	<b>Intel HD Graphics 4000</b> 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 UltraNav™	buttonless touchpad below keyboard, multi-touch														
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions <sup>3</sup>	<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 <sup>2</sup>	4-cell: from 2.96 lb (1.34kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: 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 <sup>10</sup>	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	<b>Mobile Intel QM77 Express Chipset</b>														
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 <sup>4</sup>	<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 upgradeable														
Carrier	None														
Modem	None														
Bluetooth™	<i>Some:</i> 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	<i>Some:</i> AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time/ service upgrades <sup>22</sup> available														

See footnotes for more detailed information

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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 <sup>a</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit		
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Power Manager  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion  - <b>All models</b> • 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	<b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										<b>ThinkPad Ultrabase Series 3</b> • 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 <sup>3</sup> Weight <sup>2</sup> Case material Standard Battery External Battery Battery - life <sup>10</sup>	<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										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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> available										65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>		

See footnotes for more detailed information

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

<sup>41</sup> 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 <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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) <sup>43</sup>	0A36280	ann	03/01/11

<sup>43</sup> 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](http://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](http://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](http://www.lenovopowertips.com)

## Carrying Cases

*Up to 12.5" widescreen models:*

ThinkPad 12.5" Ultrabook Topload <sup>72</sup>	0B47416	ann	12/04/12
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<sup>72</sup> 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](http://www.lenovo.com/support/cases)  
Lenovo luxury cases at [www.lenovoluxurycases.com](http://www.lenovoluxurycases.com)

## Monitors

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

<sup>69</sup> 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](http://www.lenovo.com/support/monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



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 <sup>9</sup> rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Bat-Blue-tery Intel vPro	Pre-load	Ann date (mm/yy)
3435-2YU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205 <sup>28</sup>	Gobi	select BT 6	vPro Pro 64	06/12
3435-2XU	i7-3520M	4GBx1	12.5" HD Multi	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 Multi	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 Multi	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 Multi	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 Multi	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 Multi	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 Multi	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 Multi	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205	upg	None BT 6	vPro Pro 64	06/12
<ul style="list-style-type: none"> <li>• Small and medium business (SMB) model(s), part of the US TopSeller™ Program</li> <li>• A depot repair service 3-year limited warranty</li> </ul>													
Positioning Processor	Convertible tablet ultraportable; one spindle <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64		
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager		
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, upgradeable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3										<b>Preloaded applications<sup>14</sup></b> (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	Outdoor: <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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: <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture All: <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	<b>Intel HD Graphics 4000</b> 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)												
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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None										Supports ThinkVantage® technologies		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	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												
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	<b>Mobile Intel QM77 Express Chipset</b> 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 <sup>4</sup> 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 upgradeable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS Some: 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 <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available										65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>		

See footnotes for more detailed information

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# ThinkPad X230 Tablet (3435) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>1</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Genuine Windows® 7 Professional 64 <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		<b>Supports ThinkVantage® technologies</b>  <b>ThinkPad Ultrabase Series 3</b> • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>2</sup> rpm	Optical in UltraBase	ThinkPad Backlit Series 3	key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Blue-tooth	Bat-tery Intel vPro	Global (G) GMP (P)	Pre-load	Ann date (mm/yy)
3437-3LU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	6205 <sup>28</sup>	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 <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager				
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											<b>Preloaded applications<sup>14</sup></b> (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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom															
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus															
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None											Supports ThinkVantage® technologies				
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	<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											<b>ThinkPad Ultrabase Series 3</b> • 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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>8</sup> 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	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 <sup>28</sup>	upg	None	None	6	vPro	G	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	G	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	G	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	G	Pro 64	06/12

## • A depot repair service 3-year limited warranty

Positioning Processor	Convertible tablet ultraportable; one spindle <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Genuine Windows® 7 Professional 64 <b>Ready to install applications</b> <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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 <sup>4</sup> 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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades</b> <sup>22</sup> available		

| 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<sup>17</sup> 24 hour x 7 day<sup>16</sup> toll-free support during the warranty period<sup>12</sup> | | |

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 <sup>1</sup> rpm	Optical in UltraBase Series 3	ThinkPad Backlit key-board	PCle Mini Card WLAN	PCle Mini Card WWAN	Finger-print reader	Blue-tooth	Bat-tery Intel vPro	Global (G) Ann date (mm/yy)	
3438-3UU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205 <sup>28</sup>	upg	None	Fing BT 6 vPro	G P 06/12	
3438-3TU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	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 <i>Out</i>	720p	180G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT 6 vPro	06/12	
3438-2TU	i5-3320M	4GBx1	12.5" HD <i>Out</i>	720p	128G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT 6 vPro	06/12	
3438-2SU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT 6 vPro	06/12	
3438-2QU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	Intel 6205	Gobi select	Fing BT 6 vPro	06/12		
3438-2PU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	No	320G 7200	Optional	Opt	None	Intel 6205	upg	None	No No 6 vPro	06/12	
3438-2JU	i5-3320M	4GBx1	12.5" HD <i>Out</i>	720p	500G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT 6 vPro	06/12	
3438-27U	i5-3320M	4GBx1	12.5" HD <i>Out</i>	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 <i>Multi</i>	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT 6 vPro	G P 06/12	
Positioning Processor	<i>Convertible tablet ultraportable; one spindle</i> <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64			
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Ready to install applications<sup>14</sup></b> (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										<b>Preloaded applications<sup>14</sup></b> (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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None										Supports ThinkVantage® technologies			
Dimensions <sup>3</sup> Weight <sup>2</sup>	<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)										<b>ThinkPad Ultrabase Series 3</b> • 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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b>													
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 <sup>4</sup>	11a/b/g/n, PCle Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2													
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													
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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available										65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			

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 <sup>2</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty**

Positioning Processor	<i>Convertible tablet ultraportable; one spindle</i> <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , 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> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None		<b>ThinkPad Ultrabase Series 3</b> • 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Dimensions <sup>3</sup> Weight <sup>2</sup>	<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 <sup>10</sup>	<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	<b>Mobile Intel QM77 Express Chipset</b> <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)		
PCIe Mini Card	Two PCI Express Mini Card slots		
PCIe WLAN <sup>4</sup>	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 (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip		
Security chip			
Fingerprint reader			
Limited warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> available		

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

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

<sup>41</sup> 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)

<i>Only WWAN upgradable models:</i>			
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 <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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) <sup>43</sup>	0A36280	ann	03/01/11

<sup>43</sup> 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](http://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](http://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](http://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](http://www.lenovo.com/support/cases)

Lenovo luxury cases at [www.lenovoluxurycases.com](http://www.lenovoluxurycases.com)

## Monitors

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

<sup>69</sup> 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](http://www.lenovo.com/support/monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad X1 Carbon (1st Gen)



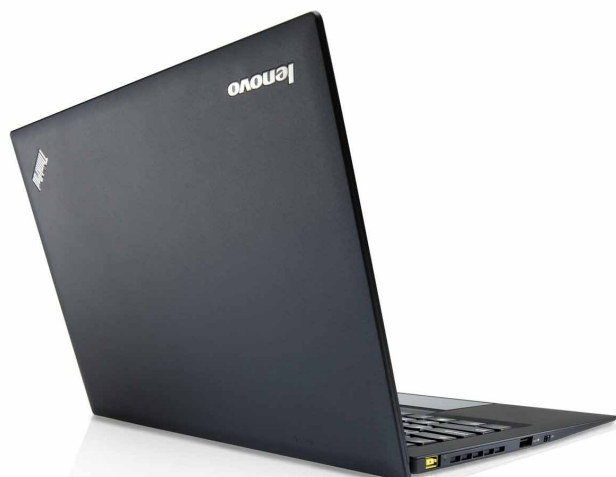
Lenovo ThinkPad X1 Carbon (1st Gen)



Lenovo USB 2.0 Ethernet Adapter  
0A36322



ThinkPad 90W AC Adapter for X1 Carbon (1st Gen)  
0B46994



Lenovo ThinkPad X1 Carbon (1st Gen)



Lenovo ThinkPad X1 Carbon (1st Gen)

# ThinkPad X1 Carbon (1st Gen) 3444 (TopSeller)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>a</sup> 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 <sup>28</sup>	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
3444-4ZU	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 <b>Intel® Core™ i5-3317U processor (2 cores, 1.70GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology <b>Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64  <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li></ul>
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets		
Optical	None		
SATA disk mSATA™ SSD	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor		
Widescreen display	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<i>14.0W" (WxDxH):</i> 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm		
Weight <sup>2</sup>	<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 <sup>10</sup>	<i>Integrated battery (45.8Whr):</i> up to 8.2 hr		
Chipset	<b>Mobile Intel QS77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades</b> <sup>22</sup> 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<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>		
For compatible accessories, please go to O-X1-C sheet;		
For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet		

See footnotes for more detailed information

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(GS1-1) November 2012



# ThinkPad X1 Carbon (1st Gen) 3444 (TopSeller) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>1</sup> 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 <sup>28</sup>	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 <sup>20</sup> - 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 <sup>5</sup> (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	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										• Access Connections™			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										• ThinkVantage Power Manager			
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										• Lenovo SimpleTap			
Keyboard	6-row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys										- Windows 8 models			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup>										• Lenovo Support			
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch										• Lenovo Companion			
ThinkLight™	None										• Lenovo QuickLaunch			
Dimensions <sup>3</sup>	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm										- All models			
Weight <sup>2</sup>	Integrated battery: from 3.0 lb (1.36kg)										• Lenovo Solution Center			
Case material	Display cover: Carbon Fiber; Bottom: Magnesium/Aluminum										• Password Manager			
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery										• Fingerprint Software (fingerprint models)			
Battery - life <sup>10</sup>	Integrated battery (45.8Whr): up to 8.2 hr										• Lenovo Cloud Storage by SugarSync			
Chipset	Mobile Intel QS77 Express Chipset										• Microsoft® Office preloaded; purchase a product key to activate			
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 <sup>4</sup>	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										90-watt AC Adapter (RapidCharge)			
Modem	None										ThinkPad Roll Cage (bottom cover)			
Bluetooth™	Bluetooth 4.0 wireless										EPEAT™ Gold rating			
Ethernet	None										ENERGY STAR® 5.2-compliant			
Intel AMT	Some: Intel Active Management Technology (iAMT)										ROHS-compliant			
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										International Warranty Service <sup>17</sup>			
Security	Power-on password, hard disk password, supervisor password, security keyhole, reset switch										24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			
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-X1-C sheet;			
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available										For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet			

See footnotes for more detailed information

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(GS1-4) November 2012

# ThinkPad X1 Carbon (1st Gen) 3444 (TopSeller) - Windows 8 - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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	<b>Ultralight, durable, secure, and stylish Ultrabook™; one spindle</b> <b>Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology <b>Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit <b>Preloaded applications<sup>5</sup></b> (only some listed) <b>- Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap <b>- Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch <b>- All models</b> • 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: <b>14.0"</b> (355mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: <b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>														
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch														
ThinkLight™	None														
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm														
Weight <sup>2</sup>	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 <sup>10</sup>	Integrated battery (45.8Whr): up to 8.2 hr														
Chipset	<b>Mobile Intel QS77 Express Chipset</b>														
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 <sup>4</sup>	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 Some: User selectable, contract required with service provider														
Carrier	None														
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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades<sup>22</sup> available</b>														

See footnotes for more detailed information

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# ThinkPad X1 Carbon (1st Gen) 3444 (TopSeller) - Win 8 (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>3</sup> 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+ <i>Multi</i>	720p	240G FDE SSD	Intel 6205S <sup>28</sup>	Ericsson	AT&T	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-CXU	i5-3427U	4GBx1	14.0" HD+ <i>Multi</i>	720p	180G SSD	Intel 6205S	Ericsson	AT&T	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-CWU	i5-3427U	4GBx1	14.0" HD+ <i>Multi</i>	720p	180G SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-CUU	i7-3667U	8GBx1	14.0" HD+ <i>Multi</i>	720p	240G FDE SSD	Intel 6205S	None	None	Finger	BT	iAMT	vPro	Win8 Pro64	12/12
3444-H2U	i5-3427U	4GBx1	14.0" HD+ <i>Multi</i>	720p	180G SSD	Intel 6205S	Ericsson	selectable	Finger	BT	iAMT	vPro	Win7 Pro64	04/13
3444-GZU	i7-3667U	8GBx1	14.0" HD+ <i>Multi</i>	720p	240G FDE SSD	Intel 6205S	Ericsson	selectable	Finger	BT	iAMT	vPro	Win7 Pro64	04/13
3444-HBU	i5-3337U	4GBx1	14.0" HD+ <i>Multi</i>	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 <b>Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology <b>Intel Core i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 400:1 contrast ratio, <b>MultiTouch</b> screen supports ten-finger gesture		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.0" x 8.9" x 0.39-0.82"; 331mm x 226mm x 10.0-20.8mm		
Weight <sup>2</sup>	<i>Integrated battery:</i> from 3.4 lb (1.54kg)		
Case material	<i>Display cover:</i> Carbon Fiber; <i>Bottom:</i> Magnesium/Aluminum		
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery		
Battery - life <sup>10</sup>	<i>Integrated battery (45.8Whr):</i> up to 8.2 hr		
Chipset	<b>Mobile Intel QS77 Express Chipset</b>		
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 <sup>4</sup>	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 <i>Some:</i> User selectable, 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
For compatible accessories, please go to O-X1-C sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

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(GS1-7) July 2013



# ThinkPad X1 Carbon (1st Gen) 3448

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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 <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			Preloaded operating system <sup>20</sup> Genuine Windows® 7 Professional 64  Ready to install applications <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Rescue and Recovery™</li><li>• Password Manager</li></ul> Preloaded applications <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>• Lenovo® Solution Center</li><li>• Lenovo Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• Fingerprint Software (fingerprint models)</li><li>• ThinkVantage System Update</li><li>• ThinkVantage Power Manager</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Lenovo SimpleTap</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security 2012 (30 days of virus definitions)</li><li>• Adobe® Reader®</li><li>• Skype™ for Windows</li><li>• Evernote®</li><li>• Symantec™ VIP</li><li>• Windows Live™ Essentials</li></ul>		
Memory	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets			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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-X1-C sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet		
Optical	None					
SATA disk	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor					
mSATA™ SSD	None					
Widescreen display	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>					
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch					
ThinkLight™	None					
Dimensions <sup>3</sup>	14.0W" (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm					
Weight <sup>2</sup>	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 <sup>10</sup>	Integrated battery (45.8Whr): up to 8.2 hr					
Chipset	<b>Mobile Intel QS77 Express Chipset</b>					
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	Some: Mini DisplayPort to VGA Monitor Cable (0A36536)					
PCIe Mini Card	Two PCI Express Mini Card slots					
PCIe WLAN <sup>4</sup>	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	Some: 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 <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available					

See footnotes for more detailed information

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(GS1-2) October 2012

# ThinkPad X1 Carbon (1st Gen) 3448 (Windows 8)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>9</sup> 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 <sup>28</sup>	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> <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> <ul style="list-style-type: none"><li>- Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit</li><li>- Some: Windows 8 Pro 64-bit</li></ul> <b>Preloaded applications</b> <sup>5</sup> (only some listed) <ul style="list-style-type: none"><li>- <b>Windows 7 models</b><ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li></ul></li><li>- <b>Windows 8 models</b><ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li></ul></li><li>- <b>All models</b><ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li></ul></li></ul>
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	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>	
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions <sup>3</sup>	<i>14.0W" (WxDxH):</i> 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm	
Weight <sup>2</sup>	<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 <sup>10</sup>	<i>Integrated battery (45.8Whr):</i> up to 8.2 hr	
Chipset	<b>Mobile Intel QS77 Express Chipset</b>	
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades</b> <sup>22</sup> available	

See footnotes for more detailed information

# ThinkPad X1 Carbon (1st Gen) 3448 (Windows 8) - MultiTouch

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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	G	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	G	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	G	Win7 Pro64	03/14

• A depot repair service 3-year limited warranty

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™: one spindle <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Windows® 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security (30 days of virus definitions)</li></ul>
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	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 400:1 contrast ratio, <b>MultiTouch</b> screen supports ten-finger gesture		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.0" x 8.9" x 0.39-0.82"; 331mm x 226mm x 10.0-20.8mm		
Weight <sup>2</sup>	<b>Integrated battery:</b> from 3.4 lb (1.54kg)		
Case material	<b>Display cover:</b> Carbon Fiber; <b>Bottom:</b> Magnesium/Aluminum		
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery		
Battery - life <sup>10</sup>	<b>Integrated battery (45.8Whr):</b> up to 8.2 hr		
Chipset	<b>Mobile Intel QS77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-yr battery - depot repair service / service upgrades</b> <sup>22</sup> 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<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>		
For compatible accessories, please go to O-X1-C sheet;		
For Lenovo service<sup>22</sup> upgrade options, please go to QP-TA sheet		

See footnotes for more detailed information

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(GS1-8) March 2014



# ThinkPad X1 Carbon (1st Gen) 3460 (Onsite)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>3</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	<i>Ultralight, durable, secure, and stylish Ultrabook™; one spindle</i> <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64  <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager  <b>Preloaded applications<sup>14</sup></b> (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	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>														
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch														
ThinkLight™	None														
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm														
Weight <sup>2</sup>	<b>Integrated battery:</b> from 3.0 lb (1.36kg)														
Case material	<b>Display cover:</b> Carbon Fiber; <b>Bottom:</b> Magnesium/Aluminum														
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery														
Battery - life <sup>10</sup>	<b>Integrated battery (45.8Whr):</b> up to 8.2 hr														
Chipset	<b>Mobile Intel QS77 Express Chipset</b>														
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 <sup>4</sup>	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	<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 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>  For compatible accessories, please go to O-X1-C sheet; For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet				

See footnotes for more detailed information

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(GS1-3) October 2012

# ThinkPad X1 Carbon (1st Gen) 3460 (Onsite) - Windows 8

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>2</sup> 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 <sup>28</sup>	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	<i>Ultralight, durable, secure, and stylish Ultrabook™; one spindle</i> <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - <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	4GB or 8GB / PC3-10600 1333MHz DDR3L / soldered to systemboard, no sockets										<b>Preloaded applications<sup>5</sup></b> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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	Solid State Drive (SSD) / SATA 6.0Gb/s, Small Form Factor													
mSATA™ SSD	None													
Widescreen display	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , 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	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>													
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch													
ThinkLight™	None													
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.0" x 8.9" x 0.31-0.74"; 331mm x 226mm x 8.0-18.8mm													
Weight <sup>2</sup>	<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 <sup>10</sup>	<i>Integrated battery (45.8Whr):</i> up to 8.2 hr													
Chipset	<b>Mobile Intel QS77 Express Chipset</b>													
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage</b> excluding holidays, next business day response time / service upgrades <sup>22</sup> available										For compatible accessories, please go to O-X1-C sheet;  For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet			

See footnotes for more detailed information

# ThinkPad X1 Carbon (1st Gen) 3460 (Onsite) - Win 8 (MultiTouch)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>5</sup> 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 <sup>28</sup>	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 service<sup>24</sup> 3-year limited warranty

Positioning Processor	Ultralight, durable, secure, and stylish Ultrabook™; one spindle <b>Intel® Core™ i5-3427U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.80GHz), HT technology <b>Intel Core i7-3667U processor (2 cores, 2.0GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		<b>Preloaded operating system</b> <sup>20</sup> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • ThinkVantage Power Manager • Lenovo SimpleTap  - <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch  - <b>All models</b> • 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	<b>14.0"</b> (355mm) <b>HD+ (1600x900) TFT color</b> , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 400:1 contrast ratio, <b>MultiTouch</b> screen supports ten-finger gesture		
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus		
Graphics	<b>Intel HD Graphics 4000</b> 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 <sup>13</sup>		
Touchpad	UltraNav™, buttonless glass surface touchpad below keyboard, multi-touch		
ThinkLight™	None		
Dimensions <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.0" x 8.9" x 0.39-0.82"; 331mm x 226mm x 10.0-20.8mm		
Weight <sup>2</sup>	<i>Integrated battery:</i> from 3.4 lb (1.54kg)		
Case material	<i>Display cover:</i> Carbon Fiber; <i>Bottom:</i> Magnesium/Aluminum		
Battery - type	Integrated Lithium Polymer 4-cell RapidCharge battery		
Battery - life <sup>10</sup>	<i>Integrated battery (45.8Whr):</i> up to 8.2 hr		
Chipset	<b>Mobile Intel QS77 Express Chipset</b>		
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 <sup>4</sup>	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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service</b> <sup>24</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> 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 <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			
For compatible accessories, please go to O-X1-C sheet;			
For Lenovo service <sup>22</sup> upgrade options, please go to QP-TA sheet			

See footnotes for more detailed information

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# ThinkPad X1 Carbon (1st Gen) 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 <sup>52</sup>	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

<sup>52</sup> 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 <sup>52</sup>	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 <sup>74</sup>	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

<sup>74</sup> 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 <sup>70</sup>	41R4493	ann 09/22/09

<sup>70</sup> Requires the *Lenovo Slim Power Tip* 0B47048

More info at [www.lenovo.com/support/poweradapters](http://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](http://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](http://www.lenovo.com/support/cases)

Lenovo luxury cases at [www.lenovoluxurycases.com](http://www.lenovoluxurycases.com)

## Monitors<sup>64</sup>

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](http://www.lenovo.com/support/monitors)

## Monitor Accessories<sup>46</sup>

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

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems

**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](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:**

- <sup>1</sup> Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
- <sup>2</sup> **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
- <sup>3</sup> **Thinness** may vary at certain points on the system.
- <sup>4</sup> **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- <sup>5</sup> **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.
- <sup>6</sup> **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.
- <sup>7</sup> **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.
- <sup>8</sup> **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- <sup>9</sup> **CD/DVD drive speeds** list maximum rates; rates are variable and are often less than the maximum.
- <sup>10</sup> **Battery:** These model numbers achieved the battery life based on MobileMark® 2007 during testing. For the ThinkPad X300, battery life is based on Business Winstone Battery Mark 2002. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- <sup>11</sup> **External monitor:** This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.
- <sup>12</sup> **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- <sup>13</sup> **Internet access not included.**
- <sup>14</sup> **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.
- <sup>16</sup> **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](http://www.verizonwireless.com).
- <sup>17</sup> **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.
- <sup>18</sup> **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.
- <sup>19</sup> **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.
- <sup>20</sup> **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](http://lenovo.com/pc/support) and enter your machine type and model number for more information.
- <sup>21</sup> **For combination drives,** maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.

<sup>22</sup> **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.

<sup>23</sup> **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](http://www.wireless.att.com) for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

<sup>24</sup> **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.

<sup>26</sup> **Full-size keyboard:** As defined by ISO/IEC 15412.

<sup>27</sup> **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.

<sup>28</sup> **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.

<sup>30</sup> **Measures only maximum** data transfer rate, not application performance. Many factors affect application performance.



<sup>32</sup> **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.

<sup>36</sup> **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.

<sup>37</sup> **Optimus graphics** Optimus only switches in Windows 7 environment. It performs as discrete graphics in Windows Vista or Windows XP Professional environment.

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