

*Personal Systems Reference
December 2011 - Version 411*

Type-model	Proc- GHz	Mem- GB	Wide- screen display	CCFL or LED	Cam- era	Switchable graphics	Disk SATA GB†	SATA rpm	optical	Mini PCIe 802.11 wireless	Mini PCIe WiLAN	Mini PCIe UWB	Bat- tery type	Workhorse (N) Global (A) daily announced	# supported on August 5, 2008
2055-2BU T9400	2.53 GHz	15.4"	WSXGA+	GMA, 3650	800	5400 Combo	Intel 5100	MMAN upg	PC	6	Yes	B32	AUG 08	(7spider)	43R2045 am 11/04/08
2055-2CU T9400	2.53 GHz	15.4"	WSXGA+	GMA, 3650	160G	5400 DVD-RW	Intel 5100	MMAN upg	PC	6	Yes	B32 W	AUG 08	(7spider)	43R1987 am 08/25/08
2055-2EU T9400	2.53 GHz	15.4"	WSXGA+	GMA, 3650	160G	5400 DVD-RW	Intel 5100	MMAN upg	PC	6	Yes	B32 W	AUG 08	(7spider)	43R2045 am 11/04/08
2055-3AU T9600	2.80 GHz	15.4"	WSXGA+	Cam GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	PC	9	Yes	B32 W	AUG 08		43R2045 am 11/04/08
2055-3SU T9400	2.53 GHz	15.4"	WSXGA+	Cam GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	PC	3	Yes	B32	AUG 08		51D493 am 03/03/09
2055-3DU T9400	2.53 GHz	15.4"	WSXGA+	Cam GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	PC	6	Yes	B32 W	Sep 08		43R1980 am 08/05/08
2055-3VU T9400	2.53 GHz	15.4"	WSXGA+	Cam GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	PC	9	Yes	B32 W	Sep 08		43R2212 am 08/05/08
2055-4TU T9400	2.53 GHz	15.4"	WSXGA+	LED Cam GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	PC	9	Yes	B32 W	Sep 08		43R2212 am 08/05/08
2055-5JU T9400	2.53 GHz	15.4"	WXGA	LED Cam GMA, 3650	64G	SSD DVD-RW	Intel 5100	WMAN upg	PC	9	Yes	B32	Sep 08		43R2212 am 08/05/08
2055-6GU T9400	2.53 GHz	15.4"	WSXGA+	Cam GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	PC	9	Yes	XP	Sep 08		43R2212 am 08/05/08
2055-7GU T9400	2.53 GHz	15.4"	WSXGA+	Cam GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	Smart	9	Yes	TAA Oct 08	1.5GB		43R2212 am 08/05/08
2055-7LU P8600	2.40 GHz	15.4"	WSXGA+	GMA, 3650	160G	7200 DVD-RW	Intel 5100	WMAN upg	Smart	9	Yes	B32 W	Dec 08		43R2212 am 08/05/08

US Govt (TAA) Processor

Memory

SATA Ultra

Wireless

7GU: US Government Model (Trade Agreement-compliant)

Intel® Core™ 2 Duo processor P8600, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus; P8600: 3MB L2 cache; T9400/T9600: 6MB L2 cache

2GB or 4GB std / 8GB max† PC3-8500 1066MHz DDR3, standard memory in both sockets; no sockets standard memory in one socket; one socket available for upgrade

RW/DVD burner

Standard bay for optional hard drive

1GB* Solid State Drive (5400 rpm)

SATA 1.5Gb/s, 2.5" wide, 9mm high, Active Protection System, removable, upgradeable

Some 15.4" (391mm) Wide

Preloaded operating system*

- Some: Microsoft® Windows® XP Professional with Vista® COA
- Some: Microsoft Windows Vista Business Edition (32-bit) with Premium logo

Additional applications

- 802.11n wireless network access
- Screen Saver
- ThinkVantage™
- ThinkVantage™
- McAfee™ SiteAdvisor™

* 43R1980 in the Ultrabay or OU with Serial Hard

ThinkPad 65W AC Adapter*

* Only compatible with the GMA45 chipset models.

ThinkPad 90W AC Adapter*

* Only compatible with the GMA45 chipset models.

Combo Adapter 41N8460

support/poweradapters

- Dual: Combo Adapter 41N8460
- PalmSecure Cable 41R4345 am 12/18/07
- Black: Cable 41R4345 am 12/18/07
- Black: Cable 41R4481 am 12/18/07

www.lenovopower.it

Carrying Cases

Up to 15.4" widescreen models:

- Lenovo Carrying Case - Messenger M
- Lenovo Carr Case - Performance Backpack
- Lenovo Standard Case
- Lenovo Standard Backpack

01/07

01/07

25/08

05/08



Personal Systems Reference Lenovo® ThinkPad® Notebooks

December 2011 - Version 411



Visit www.lenovo.com/psref for the latest version



ThinkVision® LT1421 with ThinkPad X1



ThinkPad Bluetooth Laser Mouse
41U5008



USB 2.0 Portable Secure Hard Disk
320GB 43R2019



ThinkPad Mini Dock Plus Series 3 - 90W
433810U



ThinkPad 65W AC Adapter with USB Hub
57Y4600



90W Ultraslim AC/DC Combo Adapter
41R4493

ThinkPad®



Lenovo® ThinkPad Tablet



Lenovo ThinkPad Tablet



Lenovo ThinkPad Tablet with
ThinkPad Tablet Keyboard Folio Case
0A36370



Lenovo ThinkPad Tablet



Lenovo ThinkPad Tablet with
ThinkPad Tablet Pen
0A33887



Lenovo ThinkPad Tablet

ThinkPad®



Lenovo® ThinkPad Tablet with
ThinkPad Tablet Keyboard Folio Case
0A36370



Lenovo ThinkPad Tablet with
ThinkPad Tablet DC Charger
0A36247



Lenovo ThinkPad Tablet with
ThinkPad Tablet Keyboard Folio Case
0A36370



ThinkPad Tablet AC Charger
0A36248



Lenovo ThinkPad Tablet with
ThinkPad Tablet Dock
0A33953



Lenovo ThinkPad Tablet with
ThinkPad Tablet Folio Case
0A36405

ThinkPad® Tablet 1838 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	Memory	Widescreen display	Storage	ThinkPad Tablet Pen	Camera Front/Rear (MP)	Keyboard Folio Case	ThinkPad Tablet Dock	Ear Buds	WLAN 802.11	PCIe Mini Card WWAN	Carrier	GPS	Blue-tooth	Preload	Ann Date (mm/yy)
1838-4RU	Cortex-A9	1G	10.1" WXGA	64G	Pen	2.0/5.0	None	None	None	11b/g/n ²⁸	Gobi 3000	select	GPS	BT	Android	11/11
1838-4QU	Cortex-A9	1G	10.1" WXGA	16G	Pen	2.0/5.0	None	None	None	11b/g/n	Gobi 3000	select	GPS	BT	Android	11/11
1838-4PU	Cortex-A9	1G	10.1" WXGA	32G	Pen	2.0/5.0	None	None	None	11b/g/n	Gobi 3000	select	GPS	BT	Android	11/11
1838-28U	Cortex-A9	1G	10.1" WXGA	64G	Pen	2.0/5.0	None	Dock	None	11b/g/n	None	None	GPS	BT	Android	08/11
1838-27U	Cortex-A9	1G	10.1" WXGA	64G	Pen	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	Android	08/11
1838-26U	Cortex-A9	1G	10.1" WXGA	32G	Pen	2.0/5.0	Keyboard	None	None	11b/g/n	None	None	GPS	BT	Android	08/11
1838-25U	Cortex-A9	1G	10.1" WXGA	32G	Pen	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	Android	08/11
1838-24U	Cortex-A9	1G	10.1" WXGA	16G	Pen	2.0/5.0	Keyboard	None	None	11b/g/n	None	None	GPS	BT	Android	08/11
1838-23U	Cortex-A9	1G	10.1" WXGA	16G	Pen	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	Android	08/11
1838-22U	Cortex-A9	1G	10.1" WXGA	16G	No	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	Android	08/11

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

Positioning	Touchscreen tablet for on-the-go business		Preloaded operating system ²⁰ Android™ 3.1 (HoneyComb) Preloaded applications ¹⁴ (only some listed) ● Lenovo® App Shop ● Documents To Go® ● MyScript Notes Mobile ● USB Data Transfer Utility ● User Data and SD Card Encryption ● Lenovo SocialTouch ● PrinterShare™ Mobile Print ● McAfee® Mobile Security ● Google Voice Search ● Google Talk ● Google Maps ● Netflix ● YouTube app ● Adobe® Flash player 10.2 ● Slacker Radio ● Amazon MP3 ● mSpot Music ● mSpot Movies ● Google Books ● Kindle for Android ● Zinio Magazine Reader ● eBuddy Messenger ● PokeTALK Tablet Version ● ooVoo™ Video Calls ● Angry Birds ● ArcSoft® PowerMobia® Gallery ● ArcSoft PowerMobia eBook Reader and Bookshelf
Processor	Dual-core ARM Cortex™-A9 processor (1.0 GHz per core), 1MB L2 cache		
Memory	1GB / 600MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets		
Storage	16GB, 32GB, or 64GB / eMMC (embedded Multi Media Card) flash memory on board		
Multicard reader	3-in-1 reader (SD, SDHC, MMC), SD card encryption supported		
Graphics	NVIDIA® ULP (Ultra-low power) GeForce® GPU , integrated in Tegra™ 2, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant		
Display	10.1" (256.5mm) WXGA (1280x800) TFT color , anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports pen & six-finger gesture		
Tablet pen	<i>Some:</i> ThinkPad Tablet Pen (0A33887), supports hover, tip, and pressure modes / a button for "long press" function / user replaceable AAAA battery, up to 18 months		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 5.0-megapixel, auto focus, digital zoom		
Video capture	720p video capture (back camera)		
Audio support	High Definition (HD) Audio, Wolfson WM8903 codec / monaural speaker, 0.5 watt x 1 / analog monaural microphone, combo audio/microphone jack		
Ear buds	None		
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid		
Control buttons	Power button, volume control button, reset switch, 4 function buttons (Home, Back, Open Browser, Display Lock)		
Keyboard folio case	<i>Some:</i> ThinkPad Tablet Keyboard Folio Case, connects with system via USB 2.0, 6 row, TrackPoint® pointing device, leather cover, magnetic 3-position landscape stand		
ThinkPad tablet dock	<i>Some:</i> ThinkPad Tablet Dock, one USB 2.0, one micro-USB 2.0 (not for power supply), microphone input jack, headphone jack, DC-IN connector (supports 65W AC Adapter, RapidCharge)		
Light sensor	Ambient Light Sensor		
Proximity sensor	Proximity sensor, Azoteq IQS128		
G-sensor	Accelerometer (G) sensor, supports 3-axis accelerometer		
Gyroscope	3-axis gyroscope		
eCompass	3-axis electronic compass, AKM AK8975C		
Platform	NVIDIA Tegra 2 T20		
Ports	One USB 2.0, one micro-USB 2.0 (power supply / charging support), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet Dock connector		
WLAN ⁴	11b/g/n ²⁸ wireless, Azurewave AW-NH931 module, WiFi + BT combo chip		
WWAN	<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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider		
GPS	Global Positioning System, Broadcom® BCM4751		
Bluetooth™	Bluetooth 2.1+EDR wireless, integrated in Azurewave AW-NH931 combo chip, supports BT 3.0		
Dimensions ³	10.25" x 7.15" x 0.57"; 260.4mm x 181.7mm x 14.5mm		
Weight ²	<i>WiFi model:</i> from 1.64 lb (0.74kg); <i>3G model:</i> from 1.67 lb (0.76kg)		
Case color	Black		
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
System states	Active, Deep Sleep, Off		
Battery - type	Lithium Polymer 2-cell		
Battery - life ¹⁰	up to 5 days (suspend); up to 10 hr (idle); up to 9 hr (WiFi browsing); up to 8 hr (3G browsing and video playback)		
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available		
10-watt AC Adapter (via micro-USB) <i>Optional:</i> 65W AC Adapter (via Dock) ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-Tablet sheet; For ThinkPlus™ service upgrade options, please go to S-Tablet sheet			

See footnotes for more detailed information

US model(s) announced August 16 or November 22, 2011

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(IDG1-1) November 2011

Type-model	Pro- cessor	Memory	Widescreen display	Storage	ThinkPad Tablet Pen	Camera Front/ Rear (MP)	Keyboard Folio Case	ThinkPad Tablet Dock	Ear Buds	WLAN 802.11	PCIe Mini Card WWAN	Carrier	GPS	Global (G) Blue- tooth (P)	GMP (P)	Preload	Ann Date (mm/yy)
1839-3KU	Cortex-A9	1G	10.1" WXGA	64G	Pen	2.0/5.0	None	None	None	11b/g/n ²⁸	Gobi 3000	select	GPS	BT		Android	11/11
1839-3JU	Cortex-A9	1G	10.1" WXGA	32G	Pen	2.0/5.0	None	None	None	11b/g/n	Gobi 3000	select	GPS	BT		Android	11/11
1839-28U	Cortex-A9	1G	10.1" WXGA	64G	Pen	2.0/5.0	None	Dock	None	11b/g/n	None	None	GPS	BT	G	Android	08/11
1839-27U	Cortex-A9	1G	10.1" WXGA	64G	Pen	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	G	Android	08/11
1839-26U	Cortex-A9	1G	10.1" WXGA	32G	Pen	2.0/5.0	Keyboard	None	None	11b/g/n	None	None	GPS	BT	G	Android	08/11
1839-25U	Cortex-A9	1G	10.1" WXGA	32G	Pen	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	G	Android	08/11
1839-24U	Cortex-A9	1G	10.1" WXGA	16G	Pen	2.0/5.0	Keyboard	None	None	11b/g/n	None	None	GPS	BT	G	Android	08/11
1839-23U	Cortex-A9	1G	10.1" WXGA	16G	Pen	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	G	Android	08/11
1839-22U	Cortex-A9	1G	10.1" WXGA	16G	No	2.0/5.0	None	None	None	11b/g/n	None	None	GPS	BT	G	Android	08/11

Positioning	Touchscreen tablet for on-the-go business		Preloaded operating system ²⁰ Android™ 3.1 (HoneyComb) Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">● Lenovo® App Shop● Documents To Go®● MyScript Notes Mobile● USB Data Transfer Utility● User Data and SD Card Encryption● Lenovo SocialTouch● PrinterShare™ Mobile Print● McAfee® Mobile Security● Google Voice Search● Google Talk● Google Maps● Netflix● YouTube app● Adobe® Flash player 10.2● Slacker Radio● Amazon MP3● mSpot Music● mSpot Movies● Google Books● Kindle for Android● Zinio Magazine Reader● eBuddy Messenger● PokeTALK Tablet Version● ooVoo™ Video Calls● Angry Birds● ArcSoft® PowerMobia® Gallery● ArcSoft PowerMobia eBook Reader and Bookshelf
Processor	Dual-core ARM Cortex™-A9 processor (1.0 GHz per core), 1MB L2 cache		
Memory	1GB / 600MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets		
Storage	16GB, 32GB, or 64GB / eMMC (embedded Multi Media Card) flash memory on board		
Multicard reader	3-in-1 reader (SD, SDHC, MMC), SD card encryption supported		
Graphics	NVIDIA® ULP (Ultra-low power) GeForce® GPU , integrated in Tegra™ 2, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant		
Display	10.1" (256.5mm) WXGA (1280x800) TFT color , anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing), MultiTouch screen supports pen & six-finger gesture		
Tablet pen	<i>Some:</i> ThinkPad Tablet Pen (0A33887), supports hover, tip, and pressure modes / a button for "long press" function / user replaceable AAAA battery, up to 18 months		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 5.0-megapixel, auto focus, digital zoom		
Video capture	720p video capture (back camera)		
Audio support	High Definition (HD) Audio, Wolfson WM8903 codec / monaural speaker, 0.5 watt x 1 / analog monaural microphone, combo audio/microphone jack		
Ear buds	None		
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid		
Control buttons	Power button, volume control button, reset switch, 4 function buttons (Home, Back, Open Browser, Display Lock)		
Keyboard folio case	<i>Some:</i> ThinkPad Tablet Keyboard Folio Case, connects with system via USB 2.0, 6 row, TrackPoint® pointing device, leather cover, magnetic 3-position landscape stand		
ThinkPad tablet dock	<i>Some:</i> ThinkPad Tablet Dock, one USB 2.0, one micro-USB 2.0 (not for power supply), microphone input jack, headphone jack, DC-IN connector (supports 65W AC Adapter, RapidCharge)		
Light sensor	Ambient Light Sensor		
Proximity sensor	Proximity sensor, Azoteq IQS128		
G-sensor	Accelerometer (G) sensor, supports 3-axis accelerometer		
Gyroscope	3-axis gyroscope		
eCompass	3-axis electronic compass, AKM AK8975C		
Platform	NVIDIA Tegra 2 T20		
Ports	One USB 2.0, one micro-USB 2.0 (power supply / charging support), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet Dock connector		
WLAN ⁴	11b/g/n ²⁸ wireless, Azurewave AW-NH931 module, WiFi + BT combo chip		
WWAN	<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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider		
GPS	Global Positioning System, Broadcom® BCM4751		
Bluetooth™	Bluetooth 2.1+EDR wireless, integrated in Azurewave AW-NH931 combo chip, supports BT 3.0		
Dimensions ³	10.25" x 7.15" x 0.57"; 260.4mm x 181.7mm x 14.5mm		
Weight ²	<i>WiFi model:</i> from 1.64 lb (0.74kg); <i>3G model:</i> from 1.67 lb (0.76kg)		
Case color	Black		
Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
System states	Active, Deep Sleep, Off		
Battery - type	Lithium Polymer 2-cell		
Battery - life ¹⁰	up to 5 days (suspend); up to 10 hr (idle); up to 9 hr (WiFi browsing); up to 8 hr (3G browsing and video playback)		
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available		

| 10-watt AC Adapter (via micro-USB) *Optional:* 65W AC Adapter (via Dock) ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378 | | |
| For compatible accessories, please go to O-Tablet sheet; For ThinkPlus™ service upgrade options, please go to S-Tablet sheet | | |

See footnotes for more detailed information

US model(s) announced August 16 or November 22, 2011

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(IDG1-2) November 2011

ThinkPad Tablet Expansion

ThinkPad Tablet Dock 0A33953 ann 08/16/11

Keyboard

ThinkPad Tablet Keyboard Folio Case 0A36370 ann 08/16/11

Multimedia

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

Lenovo Mini Speakers M220 55Y2033 ann 01/07/10

Lenovo Speaker M0520 (black) 57Y6360 ann 02/08/11

Lenovo Speaker M0520 (red) 57Y6361 ann 02/08/11

Tablet

ThinkPad Tablet Pen 0A33887 ann 08/16/11

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

Security

3M 10.1W Privacy Screen Protector (landscape) 0B33486 ann 09/27/11

3M 10.1W Privacy Screen Protector (portrait) 0B33487 ann 09/27/11

3M 10.1W Anti-Glare Matte Screen Protector 0B33488 ann 09/27/11

Power Adapters

ThinkPad Tablet AC Charger 0A36248 ann 08/16/11

ThinkPad Tablet DC Charger 0A36247 ann 08/16/11

ThinkPad 65W AC Adapter⁶⁶ 40Y7696 ann 01/05/06

⁶⁶ Attachment via the *ThinkPad Tablet Dock* 0A33953.

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

Carrying Cases

ThinkPad Tablet Folio Case 0A36405 ann 08/16/11

ThinkPad Tablet Keyboard Folio Case 0A36370 ann 08/16/11

ThinkPad 11W Sling Case 57Y4287 ann 08/16/11

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

Lenovo luxury cases at www.lenovoluxurycases.com

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:
<http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml>

TopSeller service upgrade options for ThinkPad Tablet

ThinkPad Tablet with 1-year Depot warranty

3 YEAR Depot Warranty	04W8773
3 YEAR Depot Warranty & ThinkPad Protection	04W8775
3 YEAR Onsite Warranty	04W8774
3 YEAR Onsite Warranty & ThinkPad Protection	04W8776

Partial list of Lenovo® ThinkPlus Services²² for ThinkPad Tablet

For more information see: http://www.lenovo.com/services_warranty/us/en/index.html

ThinkPlus service upgrade options for ThinkPad Tablet

ThinkPad Tablet with 1-year Depot warranty

1 YEAR Depot Warranty & ThinkPad Protection	04W8309
2 YEAR Depot Warranty	04W8312
2 YEAR Depot Warranty & ThinkPad Protection	04W8313
3 YEAR Depot Warranty	04W8319
3 YEAR Depot Warranty & ThinkPad Protection	04W8320
1 YEAR Onsite Warranty	04W8326
2 YEAR Onsite Warranty	04W8330
3 YEAR Onsite Warranty	04W8337

ThinkPlus Priority Support for enterprise customers

- 24x7 support with priority routing and advanced level technicians

ThinkPad Tablet with 1-year Depot warranty

1 YEAR Depot Warranty & Priority Support*	04W8310
1 YEAR Depot Warranty & ThinkPad Protection & Priority Support*	04W8311
2 YEAR Depot Warranty & Priority Support*	04W8315
2 YEAR Depot Warranty & ThinkPad Protection & Priority Support*	04W8316
3 YEAR Depot Warranty & Priority Support*	04W8322
3 YEAR Depot Warranty & ThinkPad Protection & Priority Support*	04W8323
1 YEAR Onsite Warranty & Priority Support*	04W8328
2 YEAR Onsite Warranty & Priority Support*	04W8333
2 YEAR Onsite Warranty & ThinkPad Protection & Priority Support*	04W8334
3 YEAR Onsite Warranty & Priority Support*	04W8340
3 YEAR Onsite Warranty & ThinkPad Protection & Priority Support*	04W8341

* Covered machine must have concurrent warranty coverage.



Lenovo® ThinkPad L412



Lenovo ThinkPad L412 with
ThinkPad Battery 55++ (9-cell)
57Y4186



Lenovo ThinkPad L412



Lenovo ThinkPad L412



Lenovo ThinkPad L412



Lenovo ThinkPad L412

ThinkPad® L412 4403 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Preload	Avail date
4403-33U	i3-350M	2.26		2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg	None		Blue	Pro 64	May 10
4403-34U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	None	Finger	Blue	Pro 64	May 10
≡ 4403-69U	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg	None		Blue	Pro 64	Jul 10
≡ 4403-75U	i5-480M	2.66	2.93	2GB	14.0" HD	2.0M	320G 7200	11b/g/n	WWAN upg	None			Pro 64	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-480M or i5-520M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Password Manager• ThinkVantage Power Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• ThinkVantage Toolbox• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)	
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		Supports ThinkVantage® technologies	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™			
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 2.0-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch			
ThinkLight™	None			
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm			
Weight ²	4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)			
Case color	black			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr			
Chipset	Mobile Intel HM55 Express Chipset			
ExpressCard/34	One slot (ExpressCard/34)			
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)			
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)			
PCIe Mini Card	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2			
Modem	Wireless WAN upgradable			
Bluetooth™	None			
Ethernet	<i>Some:</i> Bluetooth 2.1 wireless, LED indicator			
Intel AMT	Realtek® RTL8111DL Gigabit Network Connection			
Audio support	None			
Security	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack			
Security chip	Power-on password, hard disk password, supervisor password, security keyhole			
Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

See footnotes for important warranty information

≡ US model announced January 11, 2011; previous models on May 11 or July 6, 2010

≡ US model withdrawn effective June 2011

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Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

ThinkPad® L412 4404 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
4404-32U	i3-350M	2.26		2GB	14.0" HD	2.0M	160G 7200	11b/g/n	WWAN upg		Blue	6	Pro 64	May 10
4404-33U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg		Blue	6	Pro 64	May 10
4404-34U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Blue	6	Pro 64	May 10
4404-35U	i5-540M	2.53	3.06	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	6	Pro 64	May 10
≈ 4404-4LU	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Blue	6	Pro 64	Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M or i5-540M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Password Manager• ThinkVantage Power Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• ThinkVantage Toolbox• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch None	
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm 4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg) black Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr	
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card 11b/g/n Intel 6200 ²⁸ WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable None Bluetooth 2.1 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

Supports ThinkVantage® technologies	
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378	
ThinkPlus™.22 3-year LOR²⁴ 9x5 NBD 45K6021	
ThinkPlus 4-year LOR 9x5 NBD 45K6022	
ThinkPlus 5-year LOR 9x5 NBD 45K6024	
ThinkPlus 4-year P&L P/U Depot 45K6023	
ThinkPlus 5-year P&L P/U Depot 45K6025	
Post-warranty annual maintenance agreements at **lenovo.com/thinkplus/warranty**	

See footnotes for important warranty information

US models announced May 11 or July 6, 2010

≈ US model withdrawn effective June 2011

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Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Preload	Avail date
0530-63U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	Gobi 2000	AT&T ²³	None	Blue	Pro 32	Apr 10
0530-6LU	i3-370M	2.40	2.93	2GB	14.0" HD		160G 7200	Intel 6200			None		Pro 64	Jul 10
0530-6MU	i5-520M	2.40	2.93	2GB	14.0" HD		160G 7200	Intel 6200	WWAN upg		None		Pro 64	Jul 10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Adobe® Reader® • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> camera on top of screen, 2.0-megapixel, fixed focus	
Camera		Supports ThinkVantage® technologies
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass	
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm	
Weight ²	<i>4-cell:</i> from 4.92 lb (2.23kg); <i>6-cell:</i> from 5.11 lb (2.32kg); <i>9-cell:</i> from 5.45 lb (2.47kg)	
Case color	black	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>4-cell:</i> up to 2.8 hr; <i>6-cell:</i> up to 5.0 hr; <i>9-cell:</i> up to 8.1 hr	
Chipset	Mobile Intel HM55 Express Chipset	ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ExpressCard/34	One slot (ExpressCard/34)	
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
Intel 6200 ²⁸	11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2	
WWAN upg	<i>Some:</i> Wireless WAN upgradable	
Gobi™ 2000	<i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider	
Carrier	<i>Some:</i> AT&T®, contract required with service provider	
Modem	None	
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless, LED indicator	
Ethernet	Realtek® RTL8111DL Gigabit Network Connection	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US model announced July 6, 2010; previous models on April 20 or July 6, 2010

US model withdrawn effective June 2011

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(DMD3-3) July 2010

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Preload	Workhorse (W) Gbl (G) Educ	Avail date
0553-35U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200 ²⁸	Gobi 2000		Finger	Blue	Pro 32		Apr 10
0553-36U	i5-540M	2.53	3.06	4GB	14.0" HD	2.0M	320G 7200	Intel 6200	Gobi 2000		Finger	Blue	Pro 64		Apr 10
0553-42U	i5-520M	2.40	2.93	2GB	14.0" HD		160G 7200	11b/g/n	WWAN upg			Blue	Pro 32	W G	Apr 10
0553-43U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg			Blue	Pro 32	W G	Apr 10
☞ 0553-44U	i5-540M	2.53	3.06	3GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Finger	Blue	Pro 32	W G	Apr 10
☞ 0553-55U	i5-520M	2.40	2.93	2GB	14.0" HD		250G 5400	Intel 6200	WWAN upg			Blue	Pro 32		Apr 10
0553-56U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	Gobi 2000	AT&T ²³	Finger	Blue	Pro 32		Apr 10
☞ 0553-57U	i5-540M	2.53	3.06	3GB	14.0" HD	2.0M	160G 7200	Intel 6200	Gobi 2000		Finger	Blue	Pro 32		Apr 10
0553-58U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	11b/g/n	WWAN upg			Blue	Pro 32	Edu	Apr 10
☞ 0553-59U	i5-540M	2.53	3.06	3GB	14.0" HD	2.0M	320G 7200	Intel 6200	Gobi 2000	AT&T	Finger	Blue	Pro 32	Edu	Apr 10
0553-6TU	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200	Gobi 2000	AT&T		Blue	Pro 32		Apr 10
☞ 0553-7YU	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Finger	Blue	Pro 64		Jul 10
☞ 0553-7ZU	i5-520M	2.40	2.93	4GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Finger	Blue	Pro 64		Jul 10

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) • Some: Education software - Adobe Digital School Collection - Instructor Resources (and DVD) - Learning Creative Suite 4 (DVD) - Photoshop Elements 7 (DVD) - Premiere Elements 7 (and DVD) - Acrobat 9 Professional (DVD) - Contribute CS4 (and DVD) - Soundbooth CS4 (and DVD) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Memory	2GB, 3GB, or 4GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available														
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB⁸ (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™														
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> camera on top of screen, 2.0-megapixel, fixed focus														
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch None														
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm <i>4-cell:</i> from 4.92 lb (2.23kg); <i>6-cell:</i> from 5.11 lb (2.32kg); <i>9-cell:</i> from 5.45 lb (2.47kg) black Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell <i>4-cell:</i> up to 2.8 hr; <i>6-cell:</i> up to 5.0 hr; <i>9-cell:</i> up to 8.1 hr														
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)										65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
PCIe Mini Card 11b/g/n Intel 6200 ²⁸ WWAN upg Gobi™ 2000	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider														
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> AT&T®, contract required with service provider None Bluetooth 2.1 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / 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> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available										ThinkPlus™.22 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty				

See footnotes for important warranty information

☞ US model announced July 6, 2010; previous models on April 6, April 20, or July 6, 2010

☞ US models withdrawn effective June, August, or October, 2011

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(DMD3-1) April 2011

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Preload	Workhorse (W) Global (G) GMP (P)	Avail date
0585-42U	i5-520M	2.40	2.93	2GB	14.0" HD		160G 7200	11b/g/n	WWAN upg		Blue	Pro 32	W G P	Apr 10
0585-43U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg		Blue	Pro 32	W G P	Apr 10
≈ 0585-44U	i5-540M	2.53	3.06	3GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	Pro 32	W G P	Apr 10

- These models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5 processor i5-520M or i5-540M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 32 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Password Manager• ThinkVantage Power Manager• ThinkVantage System Update• Fingerprint Software (fingerprint models)• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Windows Live™ Toolbar• Microsoft Office 2010 preloaded; purchase product key to activate• Microsoft Research AutoCollage Touch• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	2GB or 3GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> camera on top of screen, 2.0-megapixel, fixed focus	
Camera		
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass	
Touch pad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm	
Weight ²	4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)	
Case color	black	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr	
Chipset	Mobile Intel HM55 Express Chipset	
ExpressCard/34	One slot (ExpressCard/34)	
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card 11b/g/n	Two PCI Express Mini Card slots	
Intel 6200 ²⁸	<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 6200, 2x2	
WWAN upg	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Bluetooth 2.1 wireless, LED indicator	
Ethernet	Realtek® RTL8111DL Gigabit Network Connection	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / 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> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip	
Limited warranty ¹²	3-years /1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	
		Supports ThinkVantage® technologies
		65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
		ThinkPlus™.22 4-year LOR ²⁴ 9x5 NBD 45K6038
		Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

SL410/510 500GB Disk SATA 3G/s (5400 rpm)	43N3422	ann	10/22/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann	01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann	01/07/10

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 Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 - 90W ⁶¹	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W ⁶²	433810U	ann	06/23/09

⁶¹ When docked, ThinkPad Mini Dock Series 3 - 90W (433710U)

Audio ports are inactive, ThinkPad Audio ports are active.

⁶² When docked, ThinkPad Mini Dock Plus Series 3 - 90W (433810U)

eSATA & Audio ports are inactive, ThinkPad eSATA & Audio ports are active.

Keyboard

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

Mouse

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	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	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 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

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

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

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

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

More information at www.lenovopowertips.com**Carrying Cases**

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Messenger Max	41U5253	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

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

ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad L420



Lenovo ThinkPad L420 with
ThinkPad Battery 55++ (9-cell)
57Y4186



Lenovo ThinkPad L420



Lenovo ThinkPad L420



Lenovo ThinkPad L420



Lenovo ThinkPad L420

ThinkPad® L420 7854 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7854-34U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	Finger	Blue	9	Pro 64
7854-37U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7854-38U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7854-5FU	i3-2350M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64
7854-5GU	i5-2430M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/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 Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio HD720p resolution, wider view angle, low light sensitive, fixed focus	
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch None	
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>14.0W" (WxDxH):</i> 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm <i>4-cell:</i> from 4.94 lb (2.24kg); <i>6-cell:</i> from 5.14 lb (2.33kg); <i>9-cell:</i> from 5.47 lb (2.48kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell, 6-cell, or 9-cell <i>4-cell:</i> up to 3.9 hr; <i>6-cell:</i> up to 7.0 hr; <i>9-cell:</i> up to 11.5 hr	
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM65 Express Chipset One slot (ExpressCard/34, ExpressCard/54) 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 Wireless WAN upgradable None Bluetooth 3.0 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information
US model(s) announced February 22 or October 4, 2011

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(DMD4-1) October 2011

ThinkPad® L420 7856 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7856-34U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	Finger	Blue	9	Pro 64
7856-37U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7856-38U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass	
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm	
Weight ²	<i>4-cell:</i> from 4.94 lb (2.24kg); <i>6-cell:</i> from 5.14 lb (2.33kg); <i>9-cell:</i> from 5.47 lb (2.48kg)	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell	
Battery - life ¹⁰	<i>4-cell:</i> up to 3.9 hr; <i>6-cell:</i> up to 7.0 hr; <i>9-cell:</i> up to 11.5 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
WWAN	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Realtek® RTL8111DL Gigabit Network Connection	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	
		Supports ThinkVantage® technologies
		65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
		For compatible accessories, please go to O-L420 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011

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(DMD4-2) February 2011

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G)	Preload
7827-5HU	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 64
≡ 7827-5GU	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 64
≡ 7827-44U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205 ²⁸	WWAN upg	Finger	Blue	6		Pro 64
≡ 7827-43U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64
≡ 7827-42U	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 64
≡ 7827-5DU	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 32
≡ 7827-5EU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 32
≡ 7827-5FU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg	Finger	Blue	6		Pro 32
7827-45U	i5-2540M	4GBx1	14.0" HD		500G 7200	TP 11b/g/n	WWAN upg			9		Pro 64
7827-46U	i5-2540M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	9		Pro 64
≡ 7827-47U	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 32
7827-48U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 32
7827-34U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G	Pro 64
7827-33U	i5-2540M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G	Pro 64
≡ 7827-32U	i5-2520M	2+1GB	14.0" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G	Pro 64
≡ 7827-5WU	i5-2520M	4GBx1	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 3.0Gb/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™	Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: HD720p resolution, wider view angle, low light sensitive, fixed focus	
Camera		
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass	
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm	
Weight ²	4-cell: from 4.94 lb (2.24kg); 6-cell: from 5.14 lb (2.33kg); 9-cell: from 5.47 lb (2.48kg)	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell	
Battery - life ¹⁰	4-cell: up to 3.9 hr; 6-cell: up to 7.0 hr; 9-cell: up to 11.5 hr	
Chipset	Mobile Intel HM65 Express Chipset	Supports ThinkVantage® technologies
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
WWAN	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Some: Bluetooth 3.0 wireless, LED indicator	
Ethernet	Realtek® RTL8111DL Gigabit Network Connection	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt 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 RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM	For compatible accessories, please go to O-L420 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

≡ US model announced April 5, 2011; previous models on February 22, 2011

≡ US models withdrawn effective October 2011

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(DMD4-3) April 2011

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G) GMP (P)	Preload
7829-48U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 64
≠ 7829-47U	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 64
≠ 7829-44U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205 ²⁸	WWAN upg	Finger	Blue	6		Pro 64
≠ 7829-43U	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64
≠ 7829-42U	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 64
≠ 7829-4QU	i5-2540M	2+1GB	14.0" HD		500G 7200	Intel 6205	WWAN upg			6		Pro 32
≠ 7829-4RU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 32
≠ 7829-4SU	i5-2520M	2+1GB	14.0" HD		320G 7200	Intel 6205	WWAN upg	Finger	Blue	6		Pro 32
7829-45U	i5-2540M	4GBx1	14.0" HD		500G 7200	TP 11b/g/n	WWAN upg			9		Pro 64
7829-46U	i5-2540M	4GBx1	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	9		Pro 64
≠ 7829-4TU	i5-2540M	2+1GB	14.0" HD	720p	500G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6		Pro 32
7829-4UU	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg			6		Pro 32
7829-34U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G P	Pro 64
7829-33U	i5-2540M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G P	Pro 64
≠ 7829-32U	i5-2520M	2+1GB	14.0" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G P	Pro 64

- Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Some: Solid State Drive (SSD) / SATA 3.0Gb/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™	Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: HD720p resolution, wider view angle, low light sensitive, fixed focus	
Camera	Some: HD720p resolution, wider view angle, low light sensitive, fixed focus	
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass	
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	None	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm	
Weight ²	4-cell: from 4.94 lb (2.24kg); 6-cell: from 5.14 lb (2.33kg); 9-cell: from 5.47 lb (2.48kg)	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell	
Battery - life ¹⁰	4-cell: up to 3.9 hr; 6-cell: up to 7.0 hr; 9-cell: up to 11.5 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	Supports ThinkVantage® technologies
WWAN	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Some: Bluetooth 3.0 wireless, LED indicator	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Ethernet	Realtek® RTL8111DL Gigabit Network Connection	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM	For compatible accessories, please go to O-L420 sheet;
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US models announced February 22, 2011

≠ US models withdrawn effective October 2011

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(DMD4-4) February 2011

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

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

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 - 90W	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	ann	06/23/09

Keyboard

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

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

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

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

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

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

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

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

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

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

More information at www.lenovopowertips.com**Carrying Cases**

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
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

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

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort Monitor Cable 0A36537.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
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More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad L520



Lenovo ThinkPad L520 with
ThinkPad Battery 55++ (9-cell)
57Y4186



Lenovo ThinkPad L520



Lenovo ThinkPad L520



Lenovo ThinkPad L520



Lenovo ThinkPad L520

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7859-35U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-36U	i5-2410M	4GBx1	15.6" HD+	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-38U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-68U	i3-2350M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64
7859-69U	i5-2430M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg		Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology							Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications¹⁴ (only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™											
mSATA™ SSD	None											
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio											
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus											
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch None											
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm <i>4-cell:</i> from 5.54 lb (2.51kg); <i>6-cell:</i> from 5.75 lb (2.61kg); <i>9-cell:</i> from 6.07 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell, 6-cell, or 9-cell <i>4-cell:</i> up to 3.6 hr; <i>6-cell:</i> up to 6.6 hr; <i>9-cell:</i> up to 10.8 hr											
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM65 Express Chipset One slot (ExpressCard/34, ExpressCard/54) 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)											
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable None Bluetooth 3.0 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack							Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM							For compatible accessories, please go to O-L520 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet				
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											

See footnotes for more detailed information
US model(s) announced February 22 or October 4, 2011

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ThinkPad® L520 7860 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7860-35U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7860-36U	i5-2410M	4GBx1	15.6" HD+	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7860-38U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	None		
Dimensions ³	15.6W" (WxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm		
Weight ²	4-cell: from 5.54 lb (2.51kg); 6-cell: from 5.75 lb (2.61kg); 9-cell: from 6.07 lb (2.75kg)		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell		
Battery - life ¹⁰	4-cell: up to 3.6 hr; 6-cell: up to 6.6 hr; 9-cell: up to 10.8 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1		
WWAN	Wireless WAN upgradable		
Modem	None		
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	Realtek® RTL8111DL Gigabit Network Connection		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies	
65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378	
For compatible accessories, please go to O-L520 sheet;	
For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet	

See footnotes for more detailed information
US models announced February 22, 2011

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat- tery cells	Workhorse (W) Global (G) Preload
➤ 5016-43U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205 ²⁸	WWAN upg			9	Pro 64
5016-46U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205	WWAN upg			9	Pro 64
➤ 5016-42U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205	WWAN upg			9	Pro 32
5016-44U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	9	Pro 64
5016-45U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205	WWAN upg			9	Pro 32
5016-47U	i5-2540M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Finger	Blue	9	Pro 64
➤ 5016-48U	i5-2520M	2+1GB	15.6" HD		320G 7200	Intel 6205	WWAN upg			6	Pro 64
➤ 5016-49U	i5-2520M	2+1GB	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	Pro 64
5016-33U	i5-2540M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G Pro 64
➤ 5016-32U	i5-2520M	2+1GB	15.6" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G Pro 64
5016-5ZU	i5-2540M	4GBx1	15.6" HD+		320G 7200	Intel 6205	WWAN upg			9	Pro 64

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch None		
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm 4-cell: from 5.54 lb (2.51kg); 6-cell: from 5.75 lb (2.61kg); 9-cell: from 6.07 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell, 6-cell, or 9-cell 4-cell: up to 3.6 hr; 6-cell: up to 6.6 hr; 9-cell: up to 10.8 hr		
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM65 Express Chipset One slot (ExpressCard/34, ExpressCard/54) 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

			Supports ThinkVantage® technologies
			65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
			For compatible accessories, please go to O-L520 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US model announced April 5, 2011; previous models on February 22, 2011

US models withdrawn effective October 2011

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(RUB4-3) April 2011

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Bat-tery cells	Workhorse (W) Global (G) GMP (P)	Preload
5017-46U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205 ²⁸	WWAN upg			9		Pro 64
✕ 5017-43U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205	WWAN upg			9		Pro 64
✕ 5017-42U	i5-2520M	2+1GB	15.6" HD		500G 7200	Intel 6205	WWAN upg			9		Pro 32
5017-44U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	9		Pro 64
5017-45U	i5-2540M	2GBx1	15.6" HD+	720p	320G 7200	Intel 6205	WWAN upg			9		Pro 32
5017-47U	i5-2540M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Finger	Blue	9		Pro 64
✕ 5017-48U	i5-2520M	2+1GB	15.6" HD		320G 7200	Intel 6205	WWAN upg			6		Pro 64
✕ 5017-49U	i5-2520M	2+1GB	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6		Pro 64
5017-33U	i5-2540M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	Finger	Blue	6	W G P	Pro 64
✕ 5017-32U	i5-2520M	2+1GB	15.6" HD		320G 7200	TP 11b/g/n	WWAN upg		Blue	6	W G P	Pro 64

- Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™	
mSATA™ SSD	None	
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus	
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch None	
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm <i>4-cell:</i> from 5.54 lb (2.51kg); <i>6-cell:</i> from 5.75 lb (2.61kg); <i>9-cell:</i> from 6.07 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell, 6-cell, or 9-cell <i>4-cell:</i> up to 3.6 hr; <i>6-cell:</i> up to 6.6 hr; <i>9-cell:</i> up to 10.8 hr	
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM65 Express Chipset One slot (ExpressCard/34, ExpressCard/54) 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack	Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM	For compatible accessories, please go to O-L520 sheet;
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US models announced February 22, 2011

✕ US models withdrawn effective October 2011

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(RUB4-4) February 2011

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

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

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 - 90W	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	ann	06/23/09

Keyboard

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

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

Multimedia

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

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

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

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

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

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
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

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

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort Monitor Cable 0A36537.

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad T420



Lenovo ThinkPad T420



Lenovo ThinkPad T420



Lenovo ThinkPad T420



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



ThinkPad Mini Dock Series 3 - 90W
433710U

ThinkPad® T420 4177 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Modem	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload
4177-Q8U	i5-2520M	4GBx1	14.0" HD+	720p	160G SSD	Intel 6300 ²⁸	upg	None	1394	Smart	Finger	Blue	6	iAMT	vPro	Pro 64
4177-Q5U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205 ²⁸	upg	None					6	iAMT	vPro	Pro 64
4177-Q2U	i5-2540M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	upg	None			Finger	Blue	6	iAMT	vPro	Pro 64
4177-QKU	i5-2410M	4GBx1	14.0" HD+	720p	320G 7200	Intel 1000	upg	None					6			Pro 64
4177-QJU	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	upg	None				Blue	6			Prem 64
4177-QLU	i5-2540M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	upg	None					6			Pro 64
4177-R3U	i5-2430M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	upg	None				Blue	6			Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 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> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.17" x 1.18–1.20"; 340.5mm x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.60 lb (2.09kg); <i>6-cell:</i> from 4.79 lb (2.17kg); <i>9-cell:</i> from 5.17 lb (2.35kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card WLAN ⁴ WWAN Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support Security Security chip Fingerprint reader	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <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 Wireless WAN upgradable <i>None</i> <i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
 US model(s) announced February 22, April 5, May 3, or October 4, 2011

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ThinkPad® T420 4178 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Modem	IEEE 1394	Finger-print reader	Bat-tery cells	Intel AMT	Intel vPro	Preload
4178-6UU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg		None	1394	Finger	6	iAMT	vPro	Pro 64
4178-9RU	i5-2410M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg		None			6			Pro 64
4178-59U	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg		None			6	iAMT	vPro	Pro 64
4178-57U	i5-2540M	2GBx2	14.0" HD	720p	500G 7200	Intel 6205	WWAN upg		None			6	iAMT	vPro	Pro 64
4178-56U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg		None			6	iAMT	vPro	Pro 64
4178-AFU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 1000	WWAN upg		None	1394	Finger	6			Pro 64
4178-ACU	i5-2520M	4GBx1	14.0" HD		320G 7200	Intel 1000	WWAN upg		None			6			Pro 32
4178-APU	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	Gobi 3000	selectable	None		Finger	6	iAMT	vPro	Pro 64
4178-AWU	i7-2620M	4GBx1	14.0" HD	720p	160G SSD	Intel 6205	WWAN upg		None	1394	Finger	6	iAMT	vPro	Pro 64
4178-ATU	i5-2540M	4GBx1	14.0" HD	720p	128G SSD	Intel 6205	WWAN upg		None	1394	Finger	6	iAMT	vPro	Pro 64
Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology										Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • 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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 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> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm 4-cell: from 4.60 lb (2.09kg); 6-cell: from 4.79 lb (2.17kg); 9-cell: from 5.17 lb (2.35kg) Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Carbon-Fiber Reinforced Plastic														
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery 6-cell: up to 9.0 hr; 9-cell: up to 15.0 hr; 9-cell plus Slice battery: up to 30.0 hr														
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)														
PCIe Mini Card WLAN ⁴ WWAN	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <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 <i>Some:</i> User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider														
Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	None <i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available										Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

US models announced May 31, 2011; previous models on February 22, April 5, or May 3, 2011

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ThinkPad® T420 4178 (TopSeller) - October 2011

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4178-B7U	i5-2430M	4GBx1	14.0" HD	720p	128G SSD	Intel 1000	WWAN upg	None	1394	Finger	Blue	6	No	Pro 64
4178-C9U	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 1000	WWAN upg	None	1394	Finger	Blue	6	No	Pro 64

- **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>Premiere performance; two spindles</i> Intel® Core™ i5-2430M processor (dual-core, 2.40GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 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> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio													
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus													
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.60 lb (2.09kg); <i>6-cell:</i> from 4.79 lb (2.17kg); <i>9-cell:</i> from 5.17 lb (2.35kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic													
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr													
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card WLAN ⁴ WWAN Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support Security Security chip Fingerprint reader	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable None <i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 None High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available									Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information
 US model(s) announced October 4 or October 11, 2011

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ThinkPad® T420 4178 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Preload
4178-6WU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	1394	Finger	Blue	9	vPro	Pro 64
4178-6VU	i5-2520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	Blue	9	vPro	Pro 64
4178-58U	i5-2520M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	None			Blue	9	vPro	Pro 64
4178-CAU	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	Blue	9	vPro	Pro 64

- **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>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, and Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)	
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.0W" (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm	
Weight ²	4-cell: from 4.65 lb (2.11kg); 6-cell: from 4.84 lb (2.20kg); 9-cell: from 5.22 lb (2.37kg)	
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery	
Battery - life ¹⁰	6-cell: up to 9.0 hr; 9-cell: up to 15.0 hr; 9-cell plus Slice battery: up to 30.0 hr	
Chipset	Mobile Intel QM67 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card read	None	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
WWAN	Wireless WAN upgradable	
Modem	None	
IEEE 1394	<i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

		Supports ThinkVantage® technologies
		90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
		For compatible accessories, please go to O-T420 sheet;
		For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced February 22 or October 11, 2011

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCle Mini Card WWAN/mSATA	Carrier	Modem	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Global (G) Educ	Preload
4180-MNU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	WWAN upg			1394		Fing	Blue	6	iAMT	vPro	G	Pro 64
4180-MBU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	WWAN upg		Modem			Fing	Blue	6	iAMT	vPro	G	Pro 64
4180-63U	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	WWAN upg			1394		Fing	Blue	6	iAMT	vPro	G	Pro 64
4180-62U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	WWAN upg			1394			Blue	6	iAMT	vPro	G	Pro 64
4180-KHU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	WWAN upg		Modem			Fing	Blue	6	iAMT	vPro		Pro 64
4180-NDU	i5-2540M	4GBx1	14.0" HD		320G 7200	WWAN upg			1394	Smart			6	iAMT	vPro		Pro 64
4180-NCU	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	WWAN upg		Modem					6			Edu	Prem 64
4180-N2U	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	WWAN upg		Modem		Smart	Fing	Blue	6	iAMT	vPro		Pro 64
4180-PAU	i5-2520M	4GBx1	14.0" HD	720p	128G SSD	WWAN upg					Fing	Blue	6	iAMT	vPro	G	Pro 64
4180-PFU	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Gobi 3000	selectable				Fing	Blue	6	iAMT	vPro		Pro 64

• These models have a depot repair service 3-year limited warranty
 • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology	Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 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> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.60 lb (2.09kg); <i>6-cell:</i> from 4.79 lb (2.17kg); <i>9-cell:</i> from 5.17 lb (2.35kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCle Mini Card WLAN ⁴ 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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	Supports ThinkVantage® technologies
Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> 56K V.92 ⁶ modem <i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available	

See footnotes for more detailed information

US model announced May 3, 2011; previous models on February 22, March 1, or April 5, 2011

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(NZ3-3) November 2011

ThinkPad® T420 4180 (November 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Smart Card Reader	Finger print reader	Bat-Blue-tooth	Intel vPro	Preload
4180-Q3U	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Modem	None	Smart	Finger	Blue	6 vPro	Pro 64

- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.60 lb (2.09kg); <i>6-cell:</i> from 4.79 lb (2.17kg); <i>9-cell:</i> from 5.17 lb (2.35kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴ WWAN 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 56K V.92 ⁶ modem None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
For compatible accessories, please go to O-T420 sheet; For ThinkPlus™. ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced November 1, 2011

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ThinkPad® T420 4180 (Optimus)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	IEEE 1394	Smart Card Reader	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4180-MMU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	1394		Finger	Blue	9	vPro	G	Pro 64
4180-65U	i5-2540M	2GBx2	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	1394		Finger	Blue	9	vPro	G	Pro 64
4180-64U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	1394			Blue	6	vPro	G	Pro 64
4180-NEU	i5-2540M	4GBx1	14.0" HD		320G 7200	Intel 6205	WWAN upg	1394	Smart			6	vPro		Pro 64
4180-PRU	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	1394		Finger	Blue	9	vPro		Pro 64
<ul style="list-style-type: none">• A depot repair service 3-year limited warranty• Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)					
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets														
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 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> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.65 lb (2.11kg); <i>6-cell:</i> from 4.84 lb (2.20kg); <i>9-cell:</i> from 5.22 lb (2.37kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic														
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr														
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)														
PCIe Mini Card WLAN ⁴ WWAN 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 IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378					
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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip									For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet					
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
US model(s) announced February 22 or November 1, 2011

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Preload
4236-NUU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg		1394	Finger	Blue	6	vPro	G P	Pro 64
4236-MBU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	6	vPro	G P	Pro 64
4236-NHU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	6	vPro	G P	Pro 64
4236-63U	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg		1394	Finger	Blue	6	vPro	G P	Pro 64
4236-62U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg		1394	Finger	Blue	6	vPro	G P	Pro 64
4236-PAU	i5-2520M	4GBx1	14.0" HD	720p	128G SSD	Intel 6205	WWAN upg			Finger	Blue	6	vPro	G	Pro 64

• Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
 • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 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> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>14.0W"</i> (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.60 lb (2.09kg); <i>6-cell:</i> from 4.79 lb (2.17kg); <i>9-cell:</i> from 5.17 lb (2.35kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴ WWAN 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 <i>Some:</i> 56K V.92 ⁶ modem <i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	

See footnotes for more detailed information

US model announced April 5, 2011; previous models on February 22, 2011

US model withdrawn effective March 2011

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(NZ3-5) December 2011

ThinkPad® T420 4236 (Optimus) - Onsite

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Preload
4236-NVU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	1394	Finger	Blue	9	vPro	G P	Pro 64
4236-65U	i5-2540M	2GBx2	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394		Blue	9	vPro	G P	Pro 64
4236-64U	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	1394		Blue	6	vPro	G P	Pro 64
4236-PRU	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	Blue	9	vPro	G	Pro 64

- Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 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> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, and Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.65 lb (2.11kg); <i>6-cell:</i> from 4.84 lb (2.20kg); <i>9-cell:</i> from 5.22 lb (2.37kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr	
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴ WWAN Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support Security Security chip Fingerprint reader	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	

See footnotes for more detailed information
 US model(s) announced February 22 or November 1, 2011

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ThinkPad® T420i 4177 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4177-QGU	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None	None		6	None	Pro 64
4177-R2U	i3-2350M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None	None	Blue	6	None	Pro 64

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

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.0W" (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm	
Weight ²	4-cell: from 4.60 lb (2.09kg); 6-cell: from 4.79 lb (2.17kg); 9-cell: from 5.17 lb (2.35kg)	
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery	
Battery - life ¹⁰	6-cell: up to 9.0 hr; 9-cell: up to 15.0 hr; 9-cell plus Slice battery: up to 30.0 hr	
Chipset	Mobile Intel QM67 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card read	None	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
WWAN	Wireless WAN upgradable	
Modem	None	
IEEE 1394	None	
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 ¹²	1-year - depot repair service / service upgrades ²² available	

		Supports ThinkVantage® technologies
		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
		For compatible accessories, please go to O-T420 sheet;
		For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced March 1 or October 4, 2011

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Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD Burner Ultrabay Enhanced II SATA	43N3294	ann	01/07/10

Storage and removable storage

256GB 1.8" FDE Solid State Drive ⁴¹	43N3417	ann	06/23/09
160GB 2.5" Intel Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0Gb/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

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

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 - 90W	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 170W	433830U	ann	02/22/11

Keyboard

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

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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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 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann	01/07/10

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

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

More information at www.lenovo.com/alldaycomputing

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

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493			
• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
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

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

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable 0A36537.

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

Monitor Accessories⁴⁶

DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad T420s



Lenovo ThinkPad T420s



ThinkPad Battery 42 (3-cell, bay)
57Y4536



ThinkPad Battery 66+ (6-cell)
0A36287



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



Lenovo ThinkPad T420s

ThinkPad® T420s 4170 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload
4170-33U	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205 ²⁸	WWAN upg			Blue	iAMT	vPro	Pro 64
4170-32U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	TP 11b/g/n	WWAN upg			Blue			Pro 64
4170-27U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg				iAMT	vPro	Pro 64
4170-3DU	i5-2540M	2GBx2	14.0" HD+	720p	160G SSD	DVD±RW	Intel 6205	WWAN upg	Smart		Blue	iAMT		Pro 32
4170-3BU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	Bay battery	Intel 6205	WWAN upg		Finger	Blue	iAMT	vPro	Pro 64
<div>• These small and medium business (SMB) models are part of the US TopSeller™ Program</div> <div>• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)</div>														
Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology									Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox				
Optical Bay battery	Some: DVD burner, 9.5mm Ultrabay slim, removable Some: ThinkPad Battery 42 (3-cell, bay) (57Y4536) in Option Bay									Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Ultrabay SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: Solid State Drive (SSD) / SATA 3.0Gb/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	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio													
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus													
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass													
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	<i>14.0W" (WxDxH):</i> 13.5" x 9.1" x 0.83–1.02"; 343mm x 230.1mm x 21.2–26.0mm													
Weight ²	<i>6-cell:</i> starting at 3.68 lb (1.67kg)													
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy													
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim													
Battery - life ¹⁰	<i>6-cell:</i> up to 5.5 hr; <i>6-cell plus Ultrabay battery:</i> up to 9.3 hr									Supports ThinkVantage® technologies				
Chipset	Mobile Intel QM67 Express Chipset													
ExpressCard	One slot (ExpressCard/34)													
Smart Card Read	Some: Smart Card reader													
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									<div>65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378</div> <div>For compatible accessories, please go to O-T420-S sheet;</div> <div>For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet</div>				
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2													
WWAN	Wireless WAN upgradable													
Modem	None													
Bluetooth™	Some: Bluetooth 3.0 wireless, LED indicator													
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1													
Intel AMT	Some: Intel Active Management Technology (iAMT)													
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for more detailed information

ESD models announced May 3, 2011; previous models on February 22, 2011

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ThinkPad® T420s 4171 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload
4171-53U	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205 ²⁸	WWAN upg			Blue	iAMT	vPro	Pro 64
4171-52U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg			Blue	iAMT	vPro	Pro 64
4171-6WU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205	Gobi 3000	selectable	Finger	Blue	iAMT	vPro	Pro 64
4171-6ZU	i5-2540M	4GBx1	14.0" HD+	720p	160G SSD	Intel 6205	WWAN upg		Finger	Blue	iAMT	vPro	Pro 64
4171-74U	i5-2520M	4GBx1	14.0" HD+	720p	160G SSD	Intel 1000	WWAN upg		Finger	Blue			Pro 64
<ul style="list-style-type: none">• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a depot repair service 3-year limited warranty• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)													
Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology								Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox				
Optical Bay battery	DVD burner, 9.5mm Ultrabay slim, removable								Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Ultrabay SATA disk	None One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: Solid State Drive (SSD) / SATA 3.0Gb/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	14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio												
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus												
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)												
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys												
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass												
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch												
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm												
Weight ²	6-cell: starting at 3.68 lb (1.67kg)												
Case material	Display cover: Hybrid Carbon-fiber reinforced plastic; Bottom: Magnesium alloy												
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim												
Battery - life ¹⁰	6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 9.3 hr												
Chipset	Mobile Intel QM67 Express Chipset												
ExpressCard	One slot (ExpressCard/34)												
Smart Card Read	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)												
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)												
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2								Supports ThinkVantage® technologies				
WWAN	Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider								65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Modem	None												
Bluetooth™	Bluetooth 3.0 wireless, LED indicator												
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1												
Intel AMT	Some: Intel Active Management Technology (iAMT)												
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip								For compatible accessories, please go to O-T420-S sheet;				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available								For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

US model announced August 2, 2011; previous models on February 22, May 3, or May 31, 2011

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(SN3-2) November 2011

ThinkPad® T420s 4171 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Intel vPro	Preload
4171-6JU	i7-2620M	4GBx1	14.0" HD+	720p	160G SSD	DVD±RW	Intel 6205 ²⁸	WWAN upg	None	Finger	Blue	vPro	Pro 64
4171-7FU	i7-2640M	4GBx1	14.0" HD+	720p	160G SSD	DVD±RW	Intel 6205	WWAN upg	None	Finger	Blue	vPro	Pro 64

- **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	Premiere performance and ultraportability; two spindles Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
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 3.0Gb/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	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard TrackPoint®	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
Touchpad ThinkLight™	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm		
Weight ²	6-cell: starting at 3.68 lb (1.67kg)		
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy		
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim		
Battery - life ¹⁰	6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 9.3 hr		
Chipset	Mobile Intel QM67 Express Chipset		
ExpressCard	One slot (ExpressCard/34)		
Smart Card Read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots		
WWAN	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
Modem	Wireless WAN upgradable		
Bluetooth™	None		
Ethernet	Bluetooth 3.0 wireless, LED indicator		
Intel AMT	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Audio support	Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378		
For compatible accessories, please go to O-T420-S sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet		

See footnotes for more detailed information
US model(s) announced May 31 or October 11, 2011

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Smart Card Reader	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Pre-load
4173-KUU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Bay battery	Intel 6205 ²⁸	WWAN upg				Blue	vPro		Pro 64
4173-KTU	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg				Blue	vPro		Pro 64
4173-KSU	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg				Blue	vPro		Pro 64
4173-29U	i5-2520M	4GBx1	14.0" HD+		320G 7200	DVD±RW	Intel 6205	WWAN upg			Fing	Blue	vPro	G	Pro 64
4173-2AU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg				Blue	vPro	G	Pro 64
4173-2BU	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg				Blue	vPro	G	Pro 64
4173-L5U	i5-2520M	4GBx1	14.0" HD+		320G 7200	DVD±RW	Intel 6205	WWAN upg		Smart			vPro		Pro 64
4173-L6U	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg			Fing	Blue	vPro		Pro 64
4173-LBU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	Gobi 3000	selectable		Fing	Blue	vPro		Pro 64
4173-L8U	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg			Fing	Blue	vPro	G	Pro 64

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical	<i>Some:</i> DVD burner, 9.5mm Ultrabay slim, removable	
Bay battery	<i>Some:</i> ThinkPad Battery 42 (3-cell, bay) (57Y4536) 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 3.0Gb/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	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus	
Camera		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm	
Weight ²	6-cell: starting at 3.68 lb (1.67kg)	
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy	
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim	
Battery - life ¹⁰	6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 9.3 hr	
Chipset	Mobile Intel QM67 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card Read	<i>Some:</i> Smart Card reader	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
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 <i>Some:</i> User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem	None	
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

		Supports ThinkVantage® technologies
		65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
		For compatible accessories, please go to O-T420-S sheet;
		For ThinkPlus™²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US models announced May 3, 2011; previous models on February 22, March 1, or April 5, 2011

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(SN3-3) November 2011

ThinkPad® T420s 4173 (Optimus)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Pre-load
4173-28U	i7-2620M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205 ²⁸	WWAN upg	None	None	Blue	vPro	G	Pro 64
4173-LUU	i7-2640M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg	None	None	Blue	vPro	G	Pro 64

- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
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 3.0Gb/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	14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard TrackPoint®	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass			
Touchpad ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm			
Weight ²	6-cell: starting at 3.68 lb (1.67kg)			
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy			
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim			
Battery - life ¹⁰	6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 9.3 hr			
Chipset	Mobile Intel QM67 Express Chipset			
ExpressCard	One slot (ExpressCard/34)			
Smart Card Read	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)			
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots			
WWAN	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable			
Modem	None			
Bluetooth™	Bluetooth 3.0 wireless, LED indicator			
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1			
Intel AMT	Intel Active Management Technology (iAMT)			
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
For compatible accessories, please go to O-T420-S sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced March 15 or November 1, 2011

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ThinkPad® T420s 4174 (Onsite)

Personal Systems Reference (PSREF)

	Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Intel vPro	Global (G) Preload
Tablet	4174-29U	i5-2520M	4GBx1	14.0" HD+		320G 7200	DVD±RW	Intel 6205 ²⁸	WWAN upg	Finger	Blue	vPro	G P Pro 64
	4174-2AU	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg		Blue	vPro	G P Pro 64
	4174-2BU	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg		Blue	vPro	G P Pro 64
	4174-L8U	i5-2520M	4GBx1	14.0" HD+	720p	128G SSD	DVD±RW	Intel 6205	WWAN upg	Finger	Blue	vPro	G P Pro 64

- *These models have a limited onsite service²⁴ 3-year limited warranty*
- *These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical	DVD burner, 9.5mm Ultrabay slim, removable	
Bay battery	None	
Ultrabay	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access	
SATA disk	<i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/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	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm	
Weight ²	<i>6-cell:</i> starting at 3.68 lb (1.67kg)	
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy	
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim	
Battery - life ¹⁰	<i>6-cell:</i> up to 5.5 hr; <i>6-cell plus Ultrabay battery:</i> up to 9.3 hr	
Chipset	Mobile Intel QM67 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card Read	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
WWAN	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	
	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378	
	For compatible accessories, please go to O-T420-S sheet;	
	For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet	

See footnotes for more detailed information

US model announced May 3, 2011; previous models on February 22, 2011

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ThinkPad® T420s 4174 (Optimus) - Onsite

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Optical or battery	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Intel vPro	Global (G) GMP (P)	Preload
4174-28U	i7-2620M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205 ²⁸	WWAN upg	None	Blue	vPro	G P	Pro 64
4174-PPU	i7-2640M	4GBx1	14.0" HD+	720p	320G 7200	DVD±RW	Intel 6205	WWAN upg	None	Blue	vPro	G	Pro 64

- Some models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
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 3.0Gb/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	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass			
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm			
Weight ²	6-cell: starting at 3.68 lb (1.67kg)			
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy			
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim			
Battery - life ¹⁰	6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 9.3 hr			
Chipset	Mobile Intel QM67 Express Chipset			
ExpressCard	One slot (ExpressCard/34)			
Smart Card Read	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)			
PCIe Mini Card	Two PCI Express Mini Card slots			
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2			
WWAN	Wireless WAN upgradable			
Modem	None			
Bluetooth™	Bluetooth 3.0 wireless, LED indicator			
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1			
Intel AMT	Intel Active Management Technology (iAMT)			
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available			
Supports ThinkVantage® technologies				
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
For compatible accessories, please go to O-T420-S sheet;				
For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information
 US model(s) announced March 15 or November 1, 2011

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Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Ultrabay Slim 9.5mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann 06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann 08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann 06/23/09

Storage and removable storage

160GB 2.5" Intel Solid State Drive II ⁴¹	0A33983	ann 02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann 02/22/11
250GB 7200rpm SATA 3.0G/s		
OPAL-capable FDE HDD II ⁴¹	0A33985	ann 02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann 02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann 02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

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

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
ThinkPad Port Replicator Series 3	433610W	ann 06/23/09
ThinkPad Mini Dock Series 3 - 90W	433710U	ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 170W	433830U	ann 02/22/11

Keyboard

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

Mouse

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	41U5008	ann 01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

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

Multimedia

ThinkPad In-Ear Headphones with mic	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 66+ (6-cell)	0A36287	ann 02/22/11
ThinkPad Battery 42 (3-cell, bay) ⁴²	57Y4536	ann 08/25/09
⁴² Used in Ultrabay Slim bay.		
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05
⁴⁴ Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.		

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann 03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann 08/18/09
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

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

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann 11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11
⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable 0A36537.		
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann 08/16/11

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

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad T520



Lenovo ThinkPad T520



ThinkPad Mini Dock Plus Series 3 - 90W
433810U



ThinkPad Battery 27++ (9-cell, slice)
57Y4545



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



Lenovo ThinkPad T520

ThinkPad® T520 4239 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Modem	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Global (G) Educ	Preload
4239-46U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	None		None	Blue	6	iAMT	vPro		Pro 64
4239-4CU	i5-2410M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None	Smart	None		6			Edu	Prem 64
4239-4DU	i5-2410M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None		None	Blue	6				Prem 64
4239-4EU	i5-2540M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None		None	Blue	6				Pro 32
4239-4MU	i5-2430M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None		None	Blue	6				Pro 64

• **Small and medium business (SMB) models are part of the US TopSeller™ Program**
 • **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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 3.0Gb/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	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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®	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
Touchpad	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm	
Weight ²	<i>6-cell:</i> starting at 5.54 lb (2.51kg); <i>9-cell:</i> starting at 5.89 lb (2.67kg)	
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, support optional Slice battery (57Y4545) as 2nd battery at bottom	
Battery - life ¹⁰	<i>6-cell:</i> up to 7.7 hr; <i>9-cell:</i> up to 12.8 hr; <i>9-cell plus slice battery:</i> up to 25.6 hr	
Chipset	Mobile Intel QM67 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card Read	<i>Some:</i> Smart Card reader	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	<i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	Supports ThinkVantage® technologies
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
WWAN	Wireless WAN upgradable	
Modem	None	
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless, LED indicator	
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, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	For compatible accessories, please go to O-T520 sheet;
Fingerprint reader	None	For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information
US model(s) announced February 22, March 1, April 5, June 21, or October 4, 2011

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ThinkPad® T520 4240 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Battery cells	Intel AMT	Intel vPro	Preload
4240-4AU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64
4240-2GU	i5-2540M	2GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	None		Blue	6	iAMT	vPro	Pro 64
4240-2FU	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg	None			6	iAMT	vPro	Pro 64
4240-4EU	i7-2620M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64
4240-4RU	i5-2520M	4GBx1	15.6" HD		320G 7200	Intel 1000	WWAN upg	None		Blue	6			Pro 32
4240-53U	i5-2540M	4GBx1	15.6" HD	720p	128G SSD	Intel 6205	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64
4240-66U	i7-2640M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	6	iAMT	vPro	Pro 64
<ul style="list-style-type: none">• 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>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Preloaded applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• 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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive													
mSATA™ SSD	None													
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut													
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus									Supports ThinkVantage® technologies				
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm													
Weight ²	<i>6-cell:</i> starting at 5.54 lb (2.51kg); <i>9-cell:</i> starting at 5.89 lb (2.67kg)									65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint													
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom <i>6-cell:</i> up to 7.7 hr; <i>9-cell:</i> up to 12.8 hr; <i>9-cell plus slice battery:</i> up to 25.6 hr													
Chipset	Mobile Intel QM67 Express Chipset													
ExpressCard Smart Card Read Multicard Reader Ports	One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)									For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2													
WWAN	Wireless WAN upgradable													
Modem	None													
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless, LED indicator									For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				
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, Conexant 20672 codec / stereo speakers, 1 watt 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									For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available													

See footnotes for more detailed information
 US model(s) announced February 22, March 1, April 5, May 31, or October 11, 2011

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ThinkPad® T520 4239 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload (mm/yy)	Ann Date
4239-26U	i7-2620M	4GBx2	15.6" FHD	720p	128G SSD	Intel 6300 ²⁸	WWAN upg	None	Finger	Blue	9	vPro	Pro 64	02/11
4239-23U	i5-2540M	2GBx2	15.6" HD+	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	None	Finger	Blue	9	vPro	Pro 64	02/11
4239-24U	i5-2540M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	Finger	Blue	9	vPro	Pro 64	02/11
4239-5GU	i7-2640M	4GBx2	15.6" FHD	720p	128G SSD	Intel 6300	WWAN upg	None	Finger	Blue	9	vPro	Pro 64	11/11

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

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	<i>6-cell:</i> starting at 5.67 lb (2.57kg); <i>9-cell:</i> starting at 6.02 lb (2.73kg)			
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, support optional Slice battery (57Y4545) as 2nd battery at bottom			
Battery - life ¹⁰	<i>6-cell:</i> up to 8.4 hr; <i>9-cell:</i> up to 14.0 hr; <i>9-cell plus slice battery:</i> up to 28.1 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card WLAN ⁴	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			
WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
 US model(s) announced February 22 or November 29, 2011

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ThinkPad® T520 4240 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Power Adapter (watt)	Intel AMT	Intel vPro	Preload
4240-48U	i7-2620M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg		Finger	Blue	9	90W	iAMT	vPro	Pro 64
4240-49U	i5-2520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg		Finger	Blue	9	90W	iAMT	vPro	Pro 64
4240-2HU	i5-2540M	2GBx2	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg			Blue	9	90W	iAMT	vPro	Pro 64
4240-57U	i7-2630QM	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg		Finger	Blue	9	135W			Pro 64
4240-6NU	i7-2640M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg		Finger	Blue	9	90W	iAMT	vPro	Pro 64
4240-6MU	i7-2670QM	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Modem	Finger	Blue	9	135W			Pro 64

- 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>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20GHz, 6MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)		
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets					
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 3.0Gb/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	15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut					
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus					
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)					
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions					
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm					
Weight ²	<i>6-cell:</i> starting at 5.67 lb (2.57kg); <i>9-cell:</i> starting at 6.02 lb (2.73kg)					
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, support optional Slice battery (57Y4545) as 2nd battery at bottom					
Battery - life ¹⁰	<i>6-cell:</i> up to 8.4 hr; <i>9-cell:</i> up to 14.0 hr; <i>9-cell plus slice battery:</i> up to 28.1 hr					
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)					
PCIe Mini Card WLAN ⁴ WWAN 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 <i>Some:</i> 56K V.92 ⁶ modem Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			90-watt or 135-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet		

See footnotes for more detailed information
 US model(s) announced February 22, May 31, or November 29, 2011
 ⚡ US model withdrawn effective November 2011

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4241-26U	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	None	Finger	Blue	6	vPro	Pro 64

- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
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 3.0Gb/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	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass			
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	<i>6-cell:</i> starting at 5.54 lb (2.51kg); <i>9-cell:</i> starting at 5.89 lb (2.67kg)			
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, support optional Slice battery (57Y4545) as 2nd battery at bottom			
Battery - life ¹⁰	<i>6-cell:</i> up to 7.7 hr; <i>9-cell:</i> up to 12.8 hr; <i>9-cell plus slice battery:</i> up to 25.6 hr			
Chipset	Mobile Intel QM67 Express Chipset			
ExpressCard	One slot (ExpressCard/34)			
Smart Card Read	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	<i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card	Two PCI Express Mini Card slots			
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2			
WWAN	Wireless WAN upgradable			
Modem	None			
Bluetooth™	Bluetooth 3.0 wireless, LED indicator			
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1			
Intel AMT	Intel Active Management Technology (iAMT)			
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service ¹⁷
24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
For compatible accessories, please go to O-T520 sheet;
For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
 US model announced February 22, 2011

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Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4242-4WU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Modem		Finger	Blue	6	vPro	G	Pro 64
4242-39U	i5-2540M	2GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg				Blue	6	vPro	G	Pro 64
4242-29U	i5-2520M	2GBx2	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg				Blue	6	vPro	G	Pro 64
4242-58U	i5-2540M	4GBx1	15.6" HD		320G 7200	Intel 6205	WWAN upg	Modem	Smart			9	vPro		Pro 64
<ul style="list-style-type: none">• These models have a depot repair service 3-year limited warranty• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)					
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets														
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 3.0Gb/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	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut														
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm														
Weight ²	6-cell: starting at 5.54 lb (2.51kg); 9-cell: starting at 5.89 lb (2.67kg)														
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, support optional Slice battery (57Y4545) as 2nd battery at bottom														
Battery - life ¹⁰	6-cell: up to 7.7 hr; 9-cell: up to 12.8 hr; 9-cell plus slice battery: up to 25.6 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card WLAN ⁴ WWAN 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 <i>Some:</i> 56K V.92 ⁶ modem <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹² 3-years/1-yr battery - depot repair service / service upgrades ²² available											For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

US model announced April 5, 2011; previous models on February 22, 2011

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ThinkPad® T520 4242 (Optimus)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Smart Card Reader	Finger print reader	Blue-tooth	Bat-tery Intel vPro	Global (G) GMP (P)	Pre-load
4242-4UU	i7-2620M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Modem		Finger	Blue	9	vPro	G Pro 64
4242-4VU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	9	vPro	G Pro 64
4242-27U	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg					9	vPro	G Pro 64
4242-28U	i5-2540M	2GBx2	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg			Finger	Blue	9	vPro	G Pro 64
4242-59U	i5-2540M	4GBx1	15.6" HD		320G 7200	Intel 6205	WWAN upg	Modem	Smart			9	vPro	Pro 64
4242-5UU	i7-2640M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Modem		Finger	Blue	9	vPro	G Pro 64
• A depot repair service 3-year limited warranty • Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive													
mSATA™ SSD	None													
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut													
Camera	Some: HD720p resolution, wider view angle, low light sensitive, fixed focus													
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)													
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions (WxDxH) ³	HD & HD+: 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm													
Weight ²	6-cell: starting at 5.67 lb (2.57kg); 9-cell: starting at 6.02 lb (2.73kg)													
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint													
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 8.4 hr; 9-cell: up to 14.0 hr; 9-cell plus slice battery: up to 28.1 hr													
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) Some: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Integrated model: Four USB 2.0 (one powered), Optimus model: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)									Supports ThinkVantage® technologies				
PCIe Mini Card WLAN ⁴ WWAN 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 Some: 56K V.92 ⁶ modem Some: Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack									90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip									For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available													

See footnotes for more detailed information
 US model(s) announced February 22, April 5, or October 11, 2011

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ThinkPad® T520 4243 (Onsite)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4243-4WU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Modem	Finger	Blue	6	vPro	G P	Pro 64
4243-29U	i5-2520M	2GBx2	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg			Blue	6	vPro	G P	Pro 64

- These models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
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 3.0Gb/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	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm		
Weight ²	<i>6-cell:</i> starting at 5.54 lb (2.51kg); <i>9-cell:</i> starting at 5.89 lb (2.67kg)		
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, support optional Slice battery (57Y4545) as 2nd battery at bottom		
Battery - life ¹⁰	<i>6-cell:</i> up to 7.7 hr; <i>9-cell:</i> up to 12.8 hr; <i>9-cell plus slice battery:</i> up to 25.6 hr		
Chipset	Mobile Intel QM67 Express Chipset		
ExpressCard	One slot (ExpressCard/34)		
Smart Card Read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	<i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
WWAN	Wireless WAN upgradable		
Modem	<i>Some:</i> 56K V.92 ⁶ modem		
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

Supports ThinkVantage® technologies	
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378	
For compatible accessories, please go to O-T520 sheet;	
For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet	

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® T520 4243 (Optimus) - Onsite

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4243-4UU	i7-2620M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Modem	Finger	Blue	9	vPro	G P	Pro 64
4243-4VU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	Modem	Finger	Blue	9	vPro	G P	Pro 64
4243-28U	i5-2540M	2GBx2	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg			Blue	9	vPro	G P	Pro 64
4243-27U	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg				9	vPro	G P	Pro 64
4243-5UU	i7-2640M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Modem	Finger	Blue	9	vPro	G P	Pro 64

- Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive													
mSATA™ SSD	None													
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut													
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus													
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)													
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm													
Weight ²	6-cell: starting at 5.67 lb (2.57kg); 9-cell: starting at 6.02 lb (2.73kg)													
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, support optional Slice battery (57Y4545) as 2nd battery at bottom													
Battery - life ¹⁰	6-cell: up to 8.4 hr; 9-cell: up to 14.0 hr; 9-cell plus slice battery: up to 28.1 hr													
Chipset	Mobile Intel QM67 Express Chipset													
ExpressCard	One slot (ExpressCard/34)													
Smart Card Read	None													
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)													
Ports	<i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)													
PCIe Mini Card WLAN ⁴ WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable <i>Some:</i> 56K V.92 ⁶ modem <i>Some:</i> Bluetooth 3.0 wireless, LED indicator													
Modem	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1													
Bluetooth™	Intel Active Management Technology (iAMT)													
Ethernet	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack													
Intel AMT	Power-on password, hard disk password, supervisor password, security keyhole													
Audio support	Trusted Platform Module, TCG 1.2-compliant													
Security	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Security chip														
Fingerprint reader														
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available									For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information
US model(s) announced February 22 or October 11, 2011

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ThinkPad® T520i 4239 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Preload
4239-47U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None		6	None	Pro 64
4239-4LU	i3-2350M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None	Blue	6	None	Pro 64

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

Positioning Processor	Premiere performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
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 3.0Gb/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	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	HD & HD+: 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	6-cell: starting at 5.54 lb (2.51kg); 9-cell: starting at 5.89 lb (2.67kg)			
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint			
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom			
Battery - life ¹⁰	6-cell: up to 7.7 hr; 9-cell: up to 12.8 hr; 9-cell plus slice battery: up to 25.6 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable None <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 None High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack			
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
 US model(s) announced March 1 or October 4, 2011

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Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD Burner Ultrabay Enhanced II SATA	43N3294	ann	01/07/10

Storage and removable storage

256GB 1.8" FDE Solid State Drive ⁴¹	43N3417	ann	06/23/09
160GB 2.5" Intel Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0Gb/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

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

ThinkPad Port Replicator Series 3 ⁶²	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 - 90W ⁶²	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W ⁶²	433810U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 170W	433830U	ann	02/22/11
Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09

⁶² Compatible only with dual core models.

Keyboard

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

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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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 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann	01/07/10

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

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

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ^{45, 62}	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter ⁶²	40Y7659	ann	09/20/05
ThinkPad 135W AC Adapter	55Y9317	ann	01/07/10
ThinkPad 65W AC Adapter with USB Hub ⁶²	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter ⁶²	41R4493	ann	09/22/09

⁴⁵ Only compatible with the integrated graphics models.
⁶² Compatible only with dual core models.

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
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

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

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable 0A36537.

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad W520



Lenovo ThinkPad W520



Lenovo ThinkPad W520



Lenovo ThinkPad W520



Lenovo ThinkPad W520



Lenovo ThinkPad W520

ThinkPad® W520 4270 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Color calib	Battery cells	Intel vPro	Preload
4270-26U	i7-2620M	4GBx1	15.6" HD	1000M	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	Blue	None	9	vPro	Pro 64

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **Power-packed engineering with Open GL graphics and ISV certifications**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology		Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-10600 1333MHz 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 3.0Gb/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	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut		
Color calibration	None		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M , PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm		
Weight ²	<i>6-cell:</i> starting at 5.40 lb (2.45kg); <i>9-cell:</i> starting at 5.75 lb (2.61kg)		
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 (57Y4545) as 2nd battery at bottom		
Battery - life ¹⁰	<i>6-cell:</i> up to 6.5 hr; <i>9-cell:</i> up to 10.8 hr; <i>9-cell plus slice battery:</i> up to 21.6 hr		
Chipset	Mobile Intel QM67 Express Chipset		
ExpressCard	One slot (ExpressCard/34)		
Smart Card Read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
WWAN	Wireless WAN upgradable		
Modem	56K V.92 ⁶ modem		
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies		
170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378		
For compatible accessories, please go to O-W520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet		

See footnotes for more detailed information
US model announced February 22, 2011

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(KN3W-1) November 2011

ThinkPad® W520 4276 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel AMT	Intel vPro	Preload
4276-2QU	i7-2720QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6205 ²⁸	WWAN upg				9	iAMT	vPro	Pro 64
4276-2PU	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg				9	iAMT	vPro	Pro 64
4276-23U	i7-2920XM	4GBx4	15.6" FHD	2000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger	X-Rite	9	iAMT		Pro 64
4276-39U	i7-2820QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		9	iAMT	vPro	Pro 64
4276-38U	i7-2720QM	4GBx1	15.6" HD+	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		9	iAMT	vPro	Pro 64
4276-37U	i7-2720QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		9	iAMT	vPro	Pro 64
4276-3AU	i7-2630QM	4GBx2	15.6" HD+	1000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger		9			Pro 64
<ul style="list-style-type: none">• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a depot repair service 3-year limited warranty															
Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2920XM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology										Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox				
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-10600 1333MHz 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 3.0Gb/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										Preloaded applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)• huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)				
mSATA™ SSD	None														
Widescreen display	Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration Camera	Some: huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M, PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions (WxDxH) ³	HD & HD+: 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm														
Weight ²	6-cell: starting at 5.40 lb (2.45kg); 9-cell: starting at 5.75 lb (2.61kg)														
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.5 hr; 9-cell: up to 10.8 hr; 9-cell plus slice battery: up to 21.6 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) Some: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)										Supports ThinkVantage® technologies				
PCIe Mini Card WLAN ⁴ WWAN 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 56K V.92 ⁶ modem Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Some: Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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										170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Security Security chip Fingerprint reader	Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip										For compatible accessories, please go to O-W520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
 US models announced February 22, March 1, or June 21, 2011
 < US models withdrawn effective November 2011

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ThinkPad® W520 4276 (Optimus) - TopSeller (October 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁶ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel AMT	Intel vPro	Preload
4276-3LU	i7-2860QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205 ²⁸	WWAN upg		Finger		9	iAMT	vPro	Pro 64
4276-3KU	i7-2760QM	4GBx1	15.6" HD+	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		9	iAMT	vPro	Pro 64
4276-3JU	i7-2760QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		9	iAMT	vPro	Pro 64
4276-3NU	i7-2960XM	4GBx4	15.6" FHD	2000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger	X-Rite	9	iAMT	vPro	Pro 64
4276-3MU	i7-2760QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6205	WWAN upg		Finger		9	iAMT	vPro	Pro 64
<ul style="list-style-type: none">• Small and medium business (SMB) model(s), part of the US TopSeller™ Program• A depot repair service 3-year limited warranty															
Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-2760QM processor (quad-core, 2.40GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology Intel Core i7-2960XM processor (quad-core, 2.70GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox					
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-10600 1333MHz DDR3, non-parity, dual-channel capable									Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)• huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)					
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 3.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration Camera	Some: huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M , PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions (WxDxH) ³	HD & HD+: 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm														
Weight ²	6-cell: starting at 5.40 lb (2.45kg); 9-cell: starting at 5.75 lb (2.61kg)														
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.5 hr; 9-cell: up to 10.8 hr; 9-cell plus slice battery: up to 21.6 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) Some: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card WLAN ⁴ WWAN 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 56K V.92 ⁵ modem Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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 UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip									Supports ThinkVantage® technologies 170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378					
Security Security chip Fingerprint reader										For compatible accessories, please go to O-W520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet					
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
 US model(s) announced October 11 or November 1, 2011

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ThinkPad® W520 4282 (Optimus)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4282-3SU	i7-2720QM	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205 ²⁸	WWAN upg		Fing		9	vPro	Pro 64	
4282-3RU	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Fing		9	vPro	Pro 64	
4282-26U	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Fing	X-Rite	9	vPro	G	Pro 64
4282-23U	i7-2820QM	4GBx2	15.6" FHD	2000M	720p	500G 7200	Intel 6300 ²⁸	WWAN upg		Fing		9	vPro	G	Pro 64
4282-24U	i7-2720QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6300	WWAN upg				9	vPro	G	Pro 64
4282-25U	i5-2540M	2GBx2	15.6" HD+	1000M	720p	320G 7200	Intel 6205	WWAN upg				9	vPro	G	Pro 64
4282-4CU	i7-2720QM	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Fing		9	vPro	G	Pro 64
4282-4BU	i7-2620M	4GBx1	15.6" HD+	1000M		320G 7200	Intel 6205	WWAN upg	Smart			9	vPro	G	Pro 64

• Power-packed engineering with Open GL graphics and ISV certifications

Positioning Processor	<i>Mobile workstation; two spindles</i> Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-10600 1333MHz 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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut			
Color calibration Camera	<i>Some:</i> huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest <i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M , PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)			
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	<i>6-cell:</i> starting at 5.40 lb (2.45kg); <i>9-cell:</i> starting at 5.75 lb (2.61kg)			
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom <i>6-cell:</i> up to 6.5 hr; <i>9-cell:</i> up to 10.8 hr; <i>9-cell plus slice battery:</i> up to 21.6 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	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 Wireless WAN upgradable 56K V.92 ⁶ modem Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies			
170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378			
For compatible accessories, please go to O-W520 sheet;			
For ThinkPlus™.22 service upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

US model announced March 1, 2011; previous models on February 22 or March 1, 2011

US models withdrawn effective November 2011

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(KN3W-3) November 2011

ThinkPad® W520 4282 (Optimus) - April 2011

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk(s) SATA GB ¹ rpm	RAID	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Smart Card Reader	Finger print reader	Color calib	Bat-tery cells	Intel AMT	Intel vPro	Global (G) GMP (P)	Pre-load					
4282-4EU	i7-2630QM	4GBx2	15.6" FHD	2000M	2x500G 7200	0		Intel 6300 ²⁸	upg		Fing	X-Rite	9	iAMT	vPro	G	Pro 64					
4282-45U	i7-2820QM	4GBx1	15.6" FHD	1000M	1x500G 7200		DVD±RW	Intel 6300	upg	Smart		X-Rite	9	iAMT	vPro		Pro 64					
4282-4GU	i7-2920XM	4GBx2	15.6" FHD	2000M	2x500G 7200	1		Intel 6300	upg	Smart	Fing	X-Rite	9	iAMT	vPro	G	Pro 64					
4282-4ZU	i7-2760QM	4GBx1	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg				9	iAMT	vPro	G	Pro 64					
4282-4YU	i7-2860QM	4GBx2	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg		Fing		9	iAMT	vPro	G	Pro 64					
4282-4UU	i7-2760QM	4GBx1	15.6" FHD	1000M	1x500G 7200		DVD±RW	Intel 6205 ²⁸	upg		Fing		9	iAMT	vPro		Pro 64					
<ul style="list-style-type: none">• A depot repair service 3-year limited warranty• Power-packed engineering with Open GL graphics and ISV certifications• Microsoft® Office 2010 Product Key Ready (O10PKR)																						
Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2760QM processor (quad-core, 2.40GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology Intel Core i7-2920XM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology											Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox										
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-10600 1333MHz DDR3, non-parity, dual-channel capable											Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)• huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)										
Optical Ultrabay	Some: DVD burner, 12.7mm Ultrabay Enhanced, removable																					
SATA disk	One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: Solid State Drive (SSD) / SATA 3.0Gb/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	15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut																					
Color calibration	Some: huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest																					
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus																					
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M, PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)																					
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys																					
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass																					
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch																					
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions																					
Dimensions (WxDxH) ³	HD & HD+: 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm																					
Weight ²	6-cell: starting at 5.40 lb (2.45kg); 9-cell: starting at 5.75 lb (2.61kg)																					
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint																					
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom																					
Battery - life ¹⁰	6-cell: up to 6.5 hr; 9-cell: up to 10.8 hr; 9-cell plus slice battery: up to 21.6 hr																					
Chipset	Mobile Intel QM67 Express Chipset																					
ExpressCard	One slot (ExpressCard/34)																					
Smart Card Read	Some: Smart Card reader																					
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)																					
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)																					
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3																					
WWAN	Wireless WAN upgradable																					
Modem	56K V.92 ⁶ modem																					
Bluetooth™	Bluetooth 3.0 wireless, LED indicator																					
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1																					
Intel AMT	Some: Intel Active Management Technology (iAMT)																					
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip																					
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available																					
													Supports ThinkVantage® technologies					170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
													For compatible accessories, please go to O-W520 sheet;					For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

US model(s) announced April 5, June 21, or November 1, 2011

⚡ US model withdrawn effective November 2011

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(KN3W-5) November 2011

ThinkPad® W520 4284 (Optimus) - Onsite

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Color calib	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4284-26U	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205 ²⁸	WWAN upg		Finger	X-Rite	9	vPro	G P	Pro 64
4284-23U	i7-2820QM	4GBx2	15.6" FHD	2000M	720p	500G 7200	Intel 6300 ²⁸	WWAN upg				9	vPro	G P	Pro 64
✂ 4284-24U	i7-2720QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6300	WWAN upg				9	vPro	G P	Pro 64
4284-25U	i5-2540M	2GBx2	15.6" HD+	1000M	720p	320G 7200	Intel 6205	WWAN upg				9	vPro	G P	Pro 64
✂ 4284-4CU	i7-2720QM	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger		9	vPro	G P	Pro 64
✂ 4284-4BU	i7-2620M	4GBx1	15.6" HD+	1000M		320G 7200	Intel 6205	WWAN upg	Smart			9	vPro	G P	Pro 64
<ul style="list-style-type: none">• These models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty• Power-packed engineering with Open GL graphics and ISV certifications															
Positioning Processor	Mobile workstation; two spindles Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)				
Memory	dual-core model: 16GB max ⁷ , two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets All: PC3-10600 1333MHz 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 3.0Gb/s, 2.5" wide, 7mm high Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration Camera	Some: huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest Some: HD720p resolution, wider view angle, low light sensitive, fixed focus														
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Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions (WxDxH) ³	HD & HD+: 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm														
Weight ²	6-cell: starting at 5.40 lb (2.45kg); 9-cell: starting at 5.75 lb (2.61kg)														
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.5 hr; 9-cell: up to 10.8 hr; 9-cell plus slice battery: up to 21.6 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) Some: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3										Supports ThinkVantage® technologies				
WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Wireless WAN upgradable 56K V.92 ⁶ modem Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewistown), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack										170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip										For compatible accessories, please go to O-W520 sheet;				
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available														

See footnotes for more detailed information

✂ US model announced March 1, 2011; previous models on February 22 or March 1, 2011

✂ US models withdrawn effective November 2011

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(KN3W-4) November 2011

ThinkPad® W520 4284 (Optimus) - Onsite (April 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Disk SATA GB ⁸ rpm	RAID	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Finger print reader	Color calib	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load	
4284-4EU	i7-2630QM	4GBx2	15.6" FHD	2000M	2x500G 7200	0		Intel 6300 ²⁸	upg	Finger	X-Rite	9	iAMT	vPro	G P	Pro 64
4284-4YU	i7-2860QM	4GBx2	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg			9	iAMT	vPro	G P	Pro 64
4284-4ZU	i7-2760QM	4GBx1	15.6" FHD	2000M	1x500G 7200		DVD±RW	Intel 6300	upg			9	iAMT	vPro	G P	Pro 64
<ul style="list-style-type: none">• Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty• Power-packed engineering with Open GL graphics and ISV certifications• Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor	<i>Mobile workstation; two spindles</i> Intel® Core™ i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2760QM processor (quad-core, 2.40GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology Intel Core i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)• huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)					
Memory	<i>dual-core model:</i> 16GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 32GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-10600 1333MHz 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 3.0Gb/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	15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut <i>Some:</i> huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest															
Color calibration Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus															
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M , PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)															
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions															
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm															
Weight ²	<i>6-cell:</i> starting at 5.40 lb (2.45kg); <i>9-cell:</i> starting at 5.75 lb (2.61kg)															
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 (57Y4545) as 2nd battery at bottom															
Battery - life ¹⁰	<i>6-cell:</i> up to 6.5 hr; <i>9-cell:</i> up to 10.8 hr; <i>9-cell plus slice battery:</i> up to 21.6 hr															
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)															
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3 Wireless WAN upgradable 56K V.92 ⁵ modem Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip															
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available															
												Supports ThinkVantage® technologies 170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-W520 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information
 US model(s) announced April 5 or November 1, 2011
 < US model withdrawn effective November 2011

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Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD Burner Ultrabay Enhanced II SATA	43N3294	ann	01/07/10

Storage and removable storage

256GB 1.8" FDE Solid State Drive ⁴¹	43N3417	ann	06/23/09
160GB 2.5" Intel Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0Gb/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

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

ThinkPad Mini Dock Plus Series 3 - 170W	433830U	ann	02/22/11
Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09

Keyboard

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

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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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 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann	01/07/10

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

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

More information at www.lenovo.com/alldaycomputing

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

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
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

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

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable 0A36537.

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e

ThinkPad® X120e (0596) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Integrated graphics	Disk SATA GB ⁹ rpm	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Blue-tooth	Bat-tery cells	Preload
0596-2UU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0596-2TU	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0596-2SU	E-240	1.50	2+1GB	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2RU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2PU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2NU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg			6	Pro 64
0596-24U	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-22U	E-240	1.50	1GBx1	11.6" HD	0.3M	HD 6310	250G 5400	None	TP 11b/g/n	WWAN upg			3	Prem 32
0596-2ZU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0596-34U	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 5400	None	TP 11b/g/n	WWAN upg			6	Prem 64

- **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 AMD Accelerated Processor E-240 with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache AMD Accelerated Processor E-350 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache		Preloaded operating system ²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Home Premium 32- <i>Some:</i> Genuine Windows 7 Home Premium 64- <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions) Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	4GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz 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 or 9.5mm high, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable, Active Protection System™		
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator		
Graphics	AMD Radeon™ HD 6310M graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution: 2048x1536 (VGA) @60Hz; 1920x1200 (HDMI) @60Hz</i>		
Keyboard TrackPoint®	Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys		
Touch pad	TrackPoint pointing device, Internet Scroll Bar ¹³ , magnifying glass		
ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch		
Dimensions ³	3-cell: 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm 6-cell: 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm		
Weight ²	3-cell: from 2.93 lb (1.33kg); 6-cell: from 3.31 lb (1.5kg)		
Case color	Matte black (top)		
Case material	Top: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: Magnesium alloy		
Battery - type	Lithium Ion 3-cell or 6-cell		
Battery - life ¹⁰	3-cell: up to 3 hr; 6-cell: up to 6 hr		
Chipset	AMD A50M FCH Chipset		
Multicard reader	4-in-1 reader (MMC, SD, Memory Stick, Memory Stick Pro)		
ExpressCard	None		
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1		
WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 2000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS <i>Some:</i> User selectable carrier at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider		
Modem	None		
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)		
Ethernet	Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1		
Audio support	High Definition (HD) Audio, Conexant CX20582 codec / stereo speakers, 1 watt x 2 / digital mono microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	None		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model(s) announced February 15, May 3, or November 29, 2011
⚡ US model withdrawn effective November 2011

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Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Integrated graphics	Disk SATA GB ⁵	rpm	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Blue-tooth	Battery cells	Preload
0611-2NU	E-350	1.60	2+1GB	11.6" HD	0.3M	HD 6310	320G	7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0611-2HU	E-350	1.60	2+1GB	11.6" HD	0.3M	HD 6310	320G	7200	None	TP 11b/g/n	WWAN upg			6	Pro 64
0611-2EU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G	7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0611-2DU	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G	7200	None	TP 11b/g/n	WWAN upg			6	Pro 64
0611-2BU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G	7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0611-29U	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G	7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0611-2SU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G	7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD Accelerated Processor E-240 with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache AMD Accelerated Processor E-350 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache											Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64			
Memory	4GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller											Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions)			
Optical SATA disk	None (use optional USB-based optical drive) Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable, Active Protection System™											Preloaded applications ¹⁴ (all OSes; only some listed) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate			
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator														
Graphics	AMD Radeon™ HD 6310M graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Maximum external resolution: 2048x1536 (VGA) @60Hz; 1920x1200 (HDMI) @60Hz														
Keyboard	Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys														
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³ , magnifying glass														
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch														
ThinkLight™	None														
Dimensions ³	3-cell: 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm 6-cell: 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm														
Weight ²	3-cell: from 2.93 lb (1.33kg); 6-cell: from 3.31 lb (1.5kg)														
Case color	Matte black (top)														
Case material	Top: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: Magnesium alloy														
Battery - type	Lithium Ion 3-cell or 6-cell														
Battery - life ¹⁰	3-cell: up to 3 hr; 6-cell: up to 6 hr														
Chipset	AMD A50M FCH Chipset														
Multicard reader	4-in-1 reader (MMC, SD, Memory Stick, Memory Stick Pro)														
ExpressCard	None														
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
PCIe Mini Card	Two PCI Express Mini Card slots														
WLAN ⁴	ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1														
WWAN	Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 2000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS Some: User selectable carrier at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider											Supports ThinkVantage® technologies			
Modem	None														
Bluetooth™	Some: Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)														
Ethernet	Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1														
Audio support	High Definition (HD) Audio, Conexant CX20582 codec / stereo speakers, 1 watt x 2 / digital mono microphone, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	None														
Fingerprint reader	None														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											For compatible accessories, please go to O-X120-E sheet; For ThinkPlus™ service upgrade options, please go to S-TA sheet			

See footnotes for more detailed information

US model announced May 3, 2011; previous models on February 15, 2011

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(MNK2-2) October 2011

Memory⁶⁴

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10

⁶⁴ System automatically clocks down for processors with 1066MHz DDR3 memory controller.

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann	01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann	01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
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Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
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
Preferred Pro USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

Security

3M 11.6W Privacy Filter from Lenovo	0A61768	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

Multimedia

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

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

ThinkPad Battery 17+ (6-cell)	57Y4559	ann	01/05/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

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

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

ThinkPad 11W Case Sleeve	57Y4286	ann	01/05/10
ThinkPad 11W Sling Case	57Y4287	ann	01/05/10

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

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11
⁶⁹ DisplayPort cable is not included.			
Lenovo LS2421p Wide 23.6" (VGA, HDMI)	4015LS1	ann	08/02/11

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad X130e



Lenovo ThinkPad X130e



Lenovo ThinkPad X130e



Lenovo ThinkPad X130e



Lenovo ThinkPad X130e



Lenovo ThinkPad X130e

ThinkPad® X130e 2338 (Intel) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Pre-load	Ann Date (mm/yy)
2338-2BU	i3-2367M	1.40	4GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	Gobi 3000	selectable	Matte black	None	Blue	6	Pro 64	12/11
2338-2AU	i3-2367M	1.40	4GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
2338-29U	i3-2367M	1.40	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
2338-28U	i3-2367M	1.40	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Prem 64	12/11

- 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 Intel® Core™ i3-2367M processor (dual-core, 1.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Hyper-Threading technology	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) Preloaded applications ¹⁴ (only some listed) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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™	
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator	
Graphics	Intel HD Graphics 3000 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 port) @60Hz	
Keyboard	Full-size, 6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 0.98"; 293.4mm x 216mm x 24.8mm	Supports ThinkVantage® technologies 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-X130-E sheet; For ThinkPlus™ service upgrade options, please go to S-TA sheet
Weight ²	<i>6-cell:</i> from 3.93 lb (1.78kg)	
Case color	Matte black (top)	
Case material	<i>Top:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; <i>Bottom:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>6-cell:</i> up to 9.0 hr	
Chipset	Mobile Intel HM65 Express Chipset	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
ExpressCard	None	
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	11b/g/n, PCIe Half Mini Card, ThinkPad b/g/n, 1x1	
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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless	
Ethernet	Gigabit ethernet, Atheros® AR8151	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Conexant CX20671 codec / stereo speakers, 2 watt x 2 / digital mono microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information
US model(s) announced December 20, 2011

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(JN1-1) December 2011

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Pre-load	Ann Date (mm/yy)
2339-2AU	i3-2367M	1.40	4GBx1	11.6" HD	0.3M	320G 7200	TP 11a/b/g/n	WWAN upg	selectable	Matte black	None	Blue	6	Pro 64	12/11
2339-29U	i3-2367M	1.40	4GBx1	11.6" HD	0.3M	320G 7200	TP 11a/b/g/n	Gobi 3000		Matte black	None	Blue	6	Pro 64	12/11
2339-28U	i3-2367M	1.40	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
2339-27U	i3-2367M	1.40	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Prem 64	12/11

- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle Intel® Core™ i3-2367M processor (dual-core, 1.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Hyper-Threading technology	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) Preloaded applications ¹⁴ (only some listed) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
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™	
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator	
Graphics	Intel HD Graphics 3000 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 port) @ 60Hz	
Keyboard	Full-size, 6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 0.98"; 293.4mm x 216mm x 24.8mm	
Weight ²	6-cell: from 3.93 lb (1.78kg)	
Case color	Matte black (top)	
Case material	<i>Top:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; <i>Bottom:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	6-cell: up to 9.0 hr	
Chipset	Mobile Intel HM65 Express Chipset	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
ExpressCard	None	
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 2x2	
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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless	
Ethernet	Gigabit ethernet, Atheros® AR8151	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Conexant CX20671 codec / stereo speakers, 2 watt x 2 / digital mono microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	Supports ThinkVantage® technologies 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-X130-E sheet; For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced December 20, 2011

ThinkPad® X130e 0622 (AMD) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁶ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Pre-load	Ann Date (mm/yy)
0622-2HU	E-450	1.65	4GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	Gobi 3000	selectable	Matte black	None	Blue	6	Pro 64	12/11
0622-2GU	E-450	1.65	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
0622-2FU	E-300	1.30	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
0622-2EU	E-450	1.65	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Prem 64	12/11
0622-2DU	E-300	1.30	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Prem 64	12/11
0622-23U	E-450	1.65	4GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11

- 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 AMD Accelerated Processor E-300 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache AMD Accelerated Processor E-450 with dual-core, virtualization technology, integrated 1333MHz DDR3 memory controller, and 1MB L2 cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) Preloaded applications ¹⁴ (only some listed) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz 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™	
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator	
Graphics	AMD Radeon HD 6310M or 6320M graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution:</i> 2048x1536 (VGA); 1920x1200 (HDMI)	
Keyboard	Full-size, 6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 0.98"; 293.4mm x 216mm x 24.8mm	
Weight ²	6-cell: from 3.93 lb (1.78kg)	
Case color	Matte black (top)	
Case material	<i>Top:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; <i>Bottom:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	6-cell: up to 9.2 hr	
Chipset	AMD A50M FCH Chipset	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
ExpressCard	None	
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	11b/g/n, PCIe Half Mini Card, ThinkPad b/g/n, 1x1	
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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless	
Ethernet	Gigabit ethernet, Atheros® AR8151	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Conexant CX20671 codec / stereo speakers, 2 watt x 2 / digital mono microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	
		Supports ThinkVantage® technologies
		65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
		For compatible accessories, please go to O-X130-E sheet; For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced December 20, 2011

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Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Pre-load	Ann Date (mm/yy)
0627-2AU	E-450	1.65	4GBx1	11.6" HD	0.3M	320G 7200	TP 11a/b/g/n	Gobi 3000	selectable	Matte black	None	Blue	6	Pro 64	12/11
0627-29U	E-450	1.65	4GBx1	11.6" HD	0.3M	320G 7200	TP 11a/b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
0627-28U	E-450	1.65	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
0627-27U	E-300	1.30	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Pro 64	12/11
0627-26U	E-450	1.65	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Prem 64	12/11
0627-25U	E-300	1.30	2GBx1	11.6" HD	0.3M	320G 7200	TP 11b/g/n	WWAN upg		Matte black	None	Blue	6	Prem 64	12/11

• Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD Accelerated Processor E-300 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache AMD Accelerated Processor E-450 with dual-core, virtualization technology, integrated 1333MHz DDR3 memory controller, and 1MB L2 cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) Preloaded applications ¹⁴ (only some listed) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz 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™	
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator	
Graphics	AMD Radeon HD 6310M or 6320M graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI (supporting HDCP to output protected content); supports dual independent display; <i>Maximum external resolution:</i> 2048x1536 (VGA); 1920x1200 (HDMI)	
Keyboard	Full-size, 6-row, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touch pad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	11.6W" (WxDxH): 11.6" x 8.5" x 0.98"; 293.4mm x 216mm x 24.8mm	
Weight ²	6-cell: from 3.93 lb (1.78kg)	
Case color	Matte black (top)	
Case material	<i>Top:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; <i>Bottom:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	6-cell: up to 9.2 hr	
Chipset	AMD A50M FCH Chipset	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
ExpressCard	None	
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 2x2	
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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless	
Ethernet	Gigabit ethernet, Atheros® AR8151	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Conexant CX20671 codec / stereo speakers, 2 watt x 2 / digital mono microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

Supports ThinkVantage® technologies	
65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378	
For compatible accessories, please go to O-X130-E sheet;	
For ThinkPlus™ service upgrade options, please go to S-TA sheet	

See footnotes for more detailed information
US model(s) announced December 20, 2011

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(JN1-4) December 2011

Supports ThinkVantage® technologies

65-watt AC Adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹²
via 800-426-7378

For compatible accessories, please go to O-X130-E sheet;
For ThinkPlus™ service upgrade options, please go to S-TA sheet

Memory⁶⁴

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10

⁶⁴ System automatically clocks down for processors with 1066MHz DDR3 memory controller.

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

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

Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09
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Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
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
Preferred Pro USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

3M 11.6W Privacy Filter from Lenovo	0A61768	ann	04/05/11
Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Multimedia

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

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

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

⁴⁴ Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

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

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

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

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

More information at www.lenovopowertips.com**Carrying Cases**

ThinkPad 11W Case Sleeve	57Y4286	ann	01/05/10
ThinkPad 11W Sling Case	57Y4287	ann	01/05/10

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

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann	08/16/11
Lenovo LS2421p Wide 23.6" (VGA, HDMI)	4015LS1	ann	08/02/11

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad X220



Lenovo ThinkPad X220 with
ThinkPad Ultrabase Series 3
0A33932



ThinkPad 65W AC Adapter
40Y7696



Lenovo ThinkPad X220



Lenovo ThinkPad X220



Lenovo ThinkPad X220

ThinkPad® X220 (4287) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Battery cells	Intel AMT	Intel vPro	Preload
4287-3KU	i5-2520M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Optional	Intel 6205	Gobi	selectable	9	iAMT	vPro	Pro 64
4287-2WU	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	DVD±RW UltraB		Intel 1000	upg	None	6	No	No	Pro 64
4287-2VU	i5-2410M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	upg	None	6	No	No	Pro 64
4287-42U	i7-2620M	4GBx1	12.5" HD	720p	128G SSD	DVD±RW UltraB		Intel 6205	upg	None	6	iAMT	vPro	Pro 64
4287-43U	i5-2430M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 1000	upg	None	6	No	No	Pro 64
4287-57U	i7-2640M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 6205	upg	None	6	iAMT	vPro	Pro 64
Positioning Processor	<i>An ultraportable for the executive on the move; one spindle</i> Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology										Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo® Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)			
Optical Ultrabay 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 3.0Gb/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													
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) HD720p resolution, wider view angle, low light sensitive, fixed focus													
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus													
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort™ (supports single-link DVI-D via cable 45J7915); 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 ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 - Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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 65W AC Adapter ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378			
Keyboard	7 row, 89-key, ThinkVantage® button, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass													
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	<i>without UltraBase:</i> 4/6-cell: 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm <i>4-cell:</i> from 2.97 lb (1.35kg); <i>6-cell:</i> from 3.31 lb (1.50kg); <i>9-cell:</i> from 3.67 lb (1.67kg)													
Weight ²	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy													
Case material	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery													
Standard Battery	None													
Extended Battery	<i>4-cell:</i> up to 4.1 hr; <i>6-cell:</i> up to 9.2 hr; <i>9-cell:</i> up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; <i>9-cell plus external battery:</i> up to 23.2 hr													
Battery - life ¹⁰														
Chipset	Mobile Intel QM67 Express Chipset													
Ultrabase	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side)													
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)													
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)													
Ports	<i>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card	Two PCI Express® Mini Card slots													
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n ²⁸ , PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2													
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS													
Carrier	<i>Some:</i> User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider													
Modem	None													
Bluetooth™	Bluetooth 3.0 wireless, LED indicator													
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, Conexant 20672 codec / stereo speakers, 1 watt 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited Warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available													

See footnotes for more detailed information

US model(s) announced March 1, May 3, August 2, October 4, or October 18, 2011

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(DSH1-1) November 2011

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁸ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4290-2WU	i5-2540M	4GBx1	12.5" HD Prem	720p	320G 7200	DVD±RW	UltraB	Intel 6205 ²⁸	WWAN upg	Fing	Blue	9	vPro	G	Pro 64
4290-2XU	i5-2540M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg			6	vPro	G	Pro 64
4290-37U	i5-2540M	4GBx1	12.5" HD		320G 7200	Optional	Opt	Intel 6300 ²⁸	WWAN upg	Fing	Blue	6	vPro		Pro 64
4290-36U	i5-2540M	4GBx1	12.5" HD		320G 7200	Optional	Opt	Intel 6205	WWAN upg			9	vPro		Pro 64
4290-35U	i7-2620M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	9	vPro		Pro 64
4290-34U	i5-2520M	4GBx1	12.5" HD Prem		320G 7200	Optional	Opt	Intel 6300	WWAN upg	Fing	Blue	6	vPro		Pro 64
4290-33U	i5-2540M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	6	vPro		Pro 64
4290-32U	i5-2540M	4GBx1	12.5" HD	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	9	vPro		Pro 64
4290-2ZU	i5-2520M	2GBx1	12.5" HD		320G 7200	Optional	Opt	Intel 6205	WWAN upg			6	vPro		Pro 64
4290-4XU	i7-2640M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Opt	Intel 6205	WWAN upg	Fing	Blue	9	vPro	G	Pro 64
• A depot repair service 3-year limited warranty • Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)					
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets														
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 3.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3														
mSATA™ SSD	None														
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: (Premium) 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing) Some: HD720p resolution, wider view angle, low light sensitive, fixed focus														
Camera	Some: HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	without UltraBase; 4/6-cell: 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm 4-cell: from 2.97 lb (1.35kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg) Display cover: Magnesium + PCABS; Bottom: Magnesium alloy Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery None 4-cell: up to 4.1 hr; 6-cell: up to 9.2 hr; 9-cell: up to 13.8 hr; external battery: up to 9.4 hr; 9-cell plus external battery: up to 23.2 hr														
Chipset	Mobile Intel QM67 Express Chipset														
Ultrabase Multicard reader ExpressCard Ports	Some: ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) i7 model: One USB 3.0, two USB 2.0 (one powered) other model: Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)														
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3 Wireless WAN upgradable None Some: Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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 Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available									Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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 ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378					

See footnotes for more detailed information
 US model(s) announced March 1 or October 4, 2011

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 (DSH1-2) November 2011

ThinkPad® X220 (4290) - May 2011

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Battery Intel vPro	Global (G) GMP (P)	Pre-load
4290-4FU	i5-2520M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Optional	Intel 6205 ²⁸	Gobi 3000	selectable	9	vPro	Pro 64
4290-48U	i7-2620M	4GBx1	12.5" HD Prem		160G SSD	Optional	Optional	Intel 6300 ²⁸	WWAN upg		9	vPro	G Pro 64
4290-47U	i7-2620M	4GBx1	12.5" HD Prem		320G 7200	Optional	Optional	Intel 6300	WWAN upg		6	vPro	G Pro 64
4290-46U	i5-2520M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg		6	vPro	G Pro 64
4290-45U	i7-2620M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg		9	vPro	G Pro 64
4290-44U	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg		6	vPro	G Pro 64
4290-43U	i5-2520M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 6205	WWAN upg		6	vPro	G Pro 64
4290-42U	i5-2540M	4GBx1	12.5" HD Prem		128G SSD	Optional	Optional	Intel 6300	WWAN upg		6	vPro	G Pro 64
<ul style="list-style-type: none">• These models have a depot repair service 3-year limited warranty• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)													
Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology									Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Preloaded applications ¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW) Supports ThinkVantage® technologies			
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3												
mSATA™ SSD	None												
Widescreen display	Some: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Some: (Premium) 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)												
Camera	Some: HD720p resolution, wider view angle, low light sensitive, fixed focus												
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	without UltraBase; 4/6-cell: 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm 4-cell: from 2.97 lb (1.35kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg) Display cover: Magnesium + PCABS; Bottom: Magnesium alloy Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery None 4-cell: up to 4.1 hr; 6-cell: up to 9.2 hr; 9-cell: up to 13.8 hr; external battery: up to 9.4 hr; 9-cell plus external battery: up to 23.2 hr									ThinkPad Ultrabase Series 3 <ul style="list-style-type: none">• Provides desktop expansion and cable management for X220 and X220 Tablet• Easily connects to the bottom of the X220 or X220 Tablet for traveling• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:<ul style="list-style-type: none">– DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292– Serial ATA Hard Drive Bay Adapter III 43N3412• Disks supported (some):<ul style="list-style-type: none">• 128GB 2.5" SSD II 0A33984 Other features: <ul style="list-style-type: none">• 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	Mobile Intel QM67 Express Chipset												
Ultrabase Multicard reader ExpressCard Ports	Option: ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) i7 model: One USB 3.0, two USB 2.0 (one powered) other model: Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)												
PCIe Mini Card WLAN ⁴ WWAN	Two PCI Express Mini Card slots Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider												
Modem Bluetooth™ Ethernet Intel AMT Audio support	None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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 UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available									65-watt AC Adapter ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378			

See footnotes for more detailed information
 US models announced May 3, 2011

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 (DSH1-4) November 2011

ThinkPad® X220 (4291) - Onsite

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4291-33U	i5-2540M	4GBx1	12.5" HD		320G 7200			Intel 6300 ²⁸	WWAN upg	Fing	Blue	6	vPro		Pro 64
4291-32U	i5-2540M	4GBx1	12.5" HD		320G 7200			Intel 6205 ²⁸	WWAN upg			9	vPro		Pro 64
4291-2ZU	i5-2520M	4GBx1	12.5" HD Prem	720p	320G 7200			Intel 6205	WWAN upg			9	vPro		Pro 64
4291-2YU	i5-2540M	2GBx1	12.5" HD	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	vPro		Pro 64
4291-2XU	i5-2540M	4GBx1	12.5" HD	720p	320G 7200			Intel 6205	WWAN upg			6	vPro	G P	Pro 64
4291-2WU	i5-2540M	4GBx1	12.5" HD Prem	720p	320G 7200	DVD±RW	UltraB	Intel 6205	WWAN upg	Fing	Blue	9	vPro	G P	Pro 64
4291-2VU	i7-2620M	4GBx1	12.5" HD Prem		320G 7200			Intel 6205	WWAN upg	Fing	Blue	9	vPro		Pro 64
4291-2UU	i5-2540M	2GBx1	12.5" HD Prem	720p	320G 7200			Intel 6205	WWAN upg			9	vPro		Pro 64
4291-2TU	i5-2520M	2GBx1	12.5" HD		320G 7200			Intel 6205	WWAN upg	Fing	Blue	9	vPro		Pro 64

- Some models are part of the **Global Models Plus program with limited onsite service²⁴ 3-year limited warranty**
- These systems are **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)		
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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 ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378		
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 3.0Gb/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, wider view angle, low light sensitive, fixed focus					
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions					
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm <i>4-cell:</i> from 2.97 lb (1.35kg); <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 Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery None <i>4-cell:</i> up to 4.1 hr; <i>6-cell:</i> up to 9.2 hr; <i>9-cell:</i> up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; <i>9-cell plus external battery:</i> up to 23.2 hr					
Chipset	Mobile Intel QM67 Express Chipset					
Ultrabase Multicard reader ExpressCard Ports	<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>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)					
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	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 Wireless WAN upgradable None <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip					
Security Security chip Fingerprint reader						
Limited warranty ¹²	3-years/1-year battery, limited onsite service ²⁴ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available					

See footnotes for more detailed information
US models announced March 1, 2011

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(DSH1-3) November 2011

ThinkPad® X220 (4291) - Onsite (May 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁸ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger-print reader	Blue-tooth cells	Bat-tery vPro	Global (G) GMP (P)	Pre-load
4291-48U	i7-2620M	4GBx1	12.5" HD Prem		160G SSD	Optional	Optional	Intel 6300 ²⁸	WWAN upg	Fing	Blue	9 vPro	G P Pro 64	
4291-47U	i7-2620M	4GBx1	12.5" HD Prem		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6 vPro	G P Pro 64	
4291-46U	i5-2520M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6 vPro	G P Pro 64	
4291-45U	i7-2620M	4GBx1	12.5" HD		320G 7200	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	9 vPro	G P Pro 64	
4291-43U	i5-2520M	4GBx1	12.5" HD	720p	128G SSD	Optional	Optional	Intel 6205 ²⁸	WWAN upg	Fing	Blue	6 vPro	G P Pro 64	
4291-44U	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg	Fing	Blue	6 vPro	G P Pro 64	
4291-42U	i5-2540M	4GBx1	12.5" HD Prem		128G SSD	Optional	Optional	Intel 6300	WWAN upg	Fing	Blue	6 vPro	G P Pro 64	
4291-4XU	i7-2640M	4GBx1	12.5" HD Prem	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg	Fing	Blue	9 vPro	G P Pro 64	
<ul style="list-style-type: none">• Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty• Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Memory	8GB max ⁷ / PC3-10600 1333MHz 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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3													
mSATA™ SSD	None													
Widescreen display	<i>Some:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> (Premium) 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing) <i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus													
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus													
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions									Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 <ul style="list-style-type: none">• Provides desktop expansion and cable management for X220 and X220 Tablet• Easily connects to the bottom of the X220 or X220 Tablet for traveling• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:<ul style="list-style-type: none">– DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292– Serial ATA Hard Drive Bay Adapter III 43N3412• Disks supported (some):<ul style="list-style-type: none">• 128GB 2.5" SSD II 0A33984 Other features: <ul style="list-style-type: none">• Power button (front)• Security key lock, security keyhole• Analog VGA DB-15 monitor port• DisplayPort (supports single-link DVI-D via cable 45J7915)• Four USB 2.0 ports• Gigabit ethernet (RJ-45) port• Microphone in and headphone out• Requires 65W or 90W AC adapter• 1.39 lb; 630g				
Dimensions ³ Weight ²	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm <i>4-cell:</i> from 2.97 lb (1.35kg); <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	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery													
External Battery	None													
Battery - life ¹⁰	<i>4-cell:</i> up to 4.1 hr; <i>6-cell:</i> up to 9.2 hr; <i>9-cell:</i> up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; <i>9-cell plus external battery:</i> up to 23.2 hr													
Chipset	Mobile Intel QM67 Express Chipset													
Ultrabase	<i>Option:</i> ThinkPad Ultrabase Series 3 (see right side)													
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)													
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)													
Ports	<i>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card WLAN ⁴	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 Wireless WAN upgradable													
WWAN	Wireless WAN upgradable													
Modem	None													
Bluetooth™	Bluetooth 3.0 wireless, LED indicator													
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1													
Intel AMT	Intel Active Management Technology (iAMT)													
Audio support	High Definition (HD) Audio, Conexant 20672 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available									65-watt AC Adapter ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				

See footnotes for more detailed information
 US model(s) announced May 3 or October 4, 2011

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ThinkPad® X220i (4286) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4286-2AU	i3-2310M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Skype™ for Windows
Memory	8GB max ⁷ / PC3-10600 1333MHz 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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3		
mSATA™ SSD	None		
Widescreen display	12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio		Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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 ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	<i>without UltraBase:</i> 4/6-cell: 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm		
Weight ²	4-cell: from 2.97 lb (1.35kg); 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	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery		
External Battery	None		
Battery - life ¹⁰	4-cell: up to 4.1 hr; 6-cell: up to 9.2 hr; 9-cell: up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; <i>9-cell plus external battery:</i> up to 23.2 hr		
Chipset	Mobile Intel QM67 Express Chipset		
Ultrabase	<i>Option:</i> ThinkPad Ultrabase Series 3 (see right side)		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Ports	<i>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
WWAN	Wireless WAN upgradable		
Modem	None		
Bluetooth™	None		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Conexant 20672 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	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model announced March 1, 2011

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ThinkPad® X220i (4287) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4287-2UU	i3-2310M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64
4287-3ZU	i3-2350M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64

- **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	An ultraportable for the executive on the move; one spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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 ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Memory	8GB max ⁷ / PC3-10600 1333MHz 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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3	
mSATA™ SSD	None	
Widescreen display Camera	12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase:</i> 4/6-cell: 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm 4-cell: from 2.97 lb (1.35kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery None 4-cell: up to 4.1 hr; 6-cell: up to 9.2 hr; 9-cell: up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; 9-cell <i>plus external battery:</i> up to 23.2 hr	
Chipset	Mobile Intel QM67 Express Chipset	
Ultrabase Multicard reader ExpressCard Ports	<i>Option:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) <i>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable None None Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 None High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

See footnotes for more detailed information
US model(s) announced March 1 or October 4, 2011

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Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Slim 9.5mm

<i>Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3</i>			
Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann	08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann	06/23/09

Storage and removable storage

160GB 2.5" Intel Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0G/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

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

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

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

ThinkPad Expansion

ThinkPad Ultrabase Series 3	0A33932	ann	03/01/11
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 - 90W	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W	433810U	ann	06/23/09
Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09

Keyboard

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

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

Multimedia

ThinkPad In-Ear Headphones with mic	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 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
ExpressCard Gemplus Smart Card Reader	41N3043	ann	06/27/06

Batteries

ThinkPad Battery 29 (4-cell)	0A36281	ann	03/01/11
ThinkPad Battery 29+ (6-cell)	0A36282	ann	03/01/11
ThinkPad Battery 29++ (9-cell)	0A36283	ann	03/01/11
ThinkPad Battery 19+ (6-cell, Slim External)	0A36280	ann	03/01/11
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

<i>Up to 12" widescreen models:</i>			
ThinkPad 12W Case Sleeve	51J0476	ann	08/18/09

<i>Up to 13.3" widescreen models:</i>			
ThinkPad Ultraportable Case	41U5062	ann	05/13/08

<i>Up to 15.6" widescreen models:</i>			
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

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

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort Monitor Cable 0A36537.

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad X220 Tablet



Lenovo ThinkPad X220 Tablet



Lenovo ThinkPad X220 Tablet



Lenovo ThinkPad Battery 19+ (6-cell, Slim External)
0A36280



Lenovo ThinkPad X220 Tablet



Lenovo ThinkPad X220 Tablet

ThinkPad® X220 Tablet (4294) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Bat- tery Blue- tooth cells	Intel vPro	Preload
4294-23U	i5-2520M	4+2GB	12.5" HD Multi	720p	160G SSD	DVD±RW	UltraBase	WiMAX	WWAN upg	Finger	Blue	6	vPro Pro 64
<ul style="list-style-type: none">• Small and medium business (SMB) model(s), part of the US TopSeller™ Program• Microsoft® Office 2010 Product Key Ready (O10PKR)													
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache). Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Ready to install applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap			
Optical Ultrabay SATA disk	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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3									Preloaded applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)			
mSATA™ SSD	None												
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom												
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus									Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 <ul style="list-style-type: none">• Provides desktop expansion and cable management for X220 and X220 Tablet• Easily connects to the bottom of the X220 or X220 Tablet for traveling• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:<ul style="list-style-type: none">– DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292– Serial ATA Hard Drive Bay Adapter III 43N3412Disks supported (some):<ul style="list-style-type: none">• 128GB 2.5" SSD II 0A33984• 500GB Disk 7200 rpm 43N3423			
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch None									Other features: <ul style="list-style-type: none">• 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 ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378			
Dimensions ³ Weight ²	<i>without UltraBase; 3-cell:</i> 12.0" x 9" 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	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery												
Extended Battery	None												
Battery - life ¹⁰	<i>3-cell:</i> up to 4.0 hr; <i>6-cell:</i> up to 8.8 hr; <i>slice battery:</i> up to 9.0 hr; <i>6-cell plus slice battery:</i> up to 17.8 hr												
Chipset	Mobile Intel QM67 Express Chipset												
Ultrabase Multicard Reader ExpressCard Ports	ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)												
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots 11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX												
WWAN Modem	Wireless WAN upgradable												
Bluetooth™	None												
Ethernet	Bluetooth 3.0 wireless, LED indicator												
Intel AMT	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1												
Audio support	Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip												
Limited warranty ¹²	1-year - depot repair service / service upgrades²² available												

See footnotes for more detailed information
US model(s) announced May 10, 2011

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ThinkPad® X220 Tablet (4296) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Battery cells	Ext Battery Intel vPro	Preload
< 4296-38U	i7-2620M	4GBx2	12.5" HD Multi	720p	160G SSD	DVD±RW	UltraB	Intel 6205 ²⁸	WWAN upg	Fing	Blue	6	None	vPro Pro 64
< 4296-37U	i7-2620M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
4296-36U	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
< 4296-35U	i7-2620M	4GBx2	12.5" HD Outdoor	720p	160G SSD			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
< 4296-34U	i7-2620M	4GBx2	12.5" HD Multi	720p	160G SSD			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
4296-33U	i5-2520M	4GBx1	12.5" HD Multi		320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Prem 64
4296-32U	i5-2520M	4GBx1	12.5" HD Multi		320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
< 4296-2ZU	i7-2620M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
< 4296-2YU	i7-2620M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
4296-2XU	i5-2520M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
4296-2WU	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	WWAN upg	Fing	Blue	6	None	vPro Pro 64
<ul style="list-style-type: none">• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a depot repair service 3-year limited warranty• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology									Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap				
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 3.0Gb/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									Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW)				
mSATA™ SSD	None									Supports ThinkVantage® technologies				
Widescreen display	Outdoor: 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS MultiTouch: 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom									ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 • 500GB Disk 7200 rpm 43N3423				
Camera	Some: HD720p resolution, wider view angle, low light sensitive, fixed focus									Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g				
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)									65-watt AC Adapter ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None													
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	without UltraBase; 3-cell: 12.0" x 9" 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 Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery None 3-cell: up to 4.0 hr; 6-cell: up to 8.8 hr; slice battery: up to 9.0 hr; 6-cell plus slice battery: up to 17.8 hr													
Chipset	Mobile Intel QM67 Express Chipset													
Ultrabase Multicard Reader ExpressCard Ports	Some: ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card WLAN ⁴ WWAN 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 Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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 UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip													
Security Security chip Fingerprint reader														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available													

See footnotes for more detailed information

US models announced March 22, 2011

US models withdrawn effective November 30, 2011

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ThinkPad® X220 Tablet (4296) - TopSeller (May 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Bat-tery cells	Intel vPro	Preload
4296-3BU	i5-2520M	4GBx1	12.5" HD <i>Outdoor</i>	720p	320G 7200	Optional	Optional	Intel 6205 ²⁸	Gobi 3000	selectable	6	vPro	Pro 64
4296-3MU	i7-2640M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	DVD±RW	UltraBase	Intel 6205	WWAN upg		6	vPro	Pro 64
4296-3LU	i7-2640M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Optional	Intel 6205	WWAN upg		6	vPro	Pro 64
<ul style="list-style-type: none">• 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>Convertible tablet ultraportable; one spindle</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology								Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 • 500GB Disk 7200 rpm 43N3423 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 ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3												
mSATA™ SSD	None												
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom												
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus												
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None												
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	<i>without UltraBase; 3-cell:</i> 12.0" x 9" 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 Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery None <i>3-cell:</i> up to 4.0 hr; <i>6-cell:</i> up to 8.8 hr; <i>slice battery:</i> up to 9.0 hr; <i>6-cell plus slice battery:</i> up to 17.8 hr												
Chipset	Mobile Intel QM67 Express Chipset												
Ultrabase Multicard Reader ExpressCard Ports	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)												
PCIe Mini Card WLAN ⁴ 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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider												
Modem Bluetooth™ Ethernet Intel AMT Audio support	None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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 UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip												
Security Security chip Fingerprint reader													
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available												

See footnotes for more detailed information
 US model(s) announced May 10 or October 4, 2011

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 (CMT1-6) November 2011

ThinkPad® X220 Tablet (4298)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Battery cells	Ext Battery cells	Global Intel vPro GMP (P)	Pre-load
4298-44U	i7-2620M	4GBx1	12.5" HD Outdoor	720p	320G 7200	DVD±RW	UltraB	Intel 6205 ²⁸	upg	Fing	Blue	6		vPro	Pro 64
4298-43U	i7-2620M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4298-42U	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4298-3ZU	i5-2520M	4GBx1	12.5" HD Outdoor	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4298-3YU	i7-2620M	4GBx1	12.5" HD Multi	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4298-3XU	i7-2620M	4GBx1	12.5" HD Outdoor	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4298-3WU	i5-2520M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro	Pro 64
4298-3VU	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro	Pro 64
4298-3UU	i7-2620M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro	G Pro 64
4298-3TU	i7-2620M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro	G Pro 64
4298-3SU	i5-2520M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4298-3RU	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4298-3QU	i5-2520M	4GBx1	12.5" HD Outdoor		320G 7200			Intel 6205	upg			6		vPro	Pro 64
4298-3PU	i5-2520M	4GBx1	12.5" HD Multi		320G 7200			Intel 6205	upg			6		vPro	Pro 64
4298-27U	i5-2520M	2GBx1	12.5" HD Outdoor		320G 7200			Intel 6205	upg	Fing	Blue	6		vPro	G Pro 64
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW)				
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 3.0Gb/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										ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 • 500GB Disk 7200 rpm 43N3423				
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom										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				
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus										65-watt AC Adapter ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch None														
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	<i>without UltraBase; 3-cell:</i> 12.0" x 9" 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 Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery <i>Some:</i> Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280) <i>3-cell:</i> up to 4.0 hr; <i>6-cell:</i> up to 8.8 hr; <i>slice battery:</i> up to 9.0 hr; <i>6-cell plus slice battery:</i> up to 17.8 hr														
Chipset	Mobile Intel QM67 Express Chipset														
Ultrabase Multicard Reader ExpressCard Ports	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)														
PCIe Mini Card WLAN ⁴ WWAN 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 <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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> UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip														
Security Security chip Fingerprint reader															
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information

US models announced March 22, 2011

US models withdrawn effective November 30, 2011

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(CMT1-2) November 2011

ThinkPad® X220 Tablet (4298) - May 2011

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase Series 3	ThinkPad Ultrabase Mini Card WLAN	PCle Mini Card WWAN	Carrier	Bat-tery cells	Ext Battery cells	Global Intel vPro (G) (P)load	Pre-load
4298-4BU	i5-2520M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt Intel 6205 ²⁸	WWAN upg	selectable	6		vPro G	Pro 64
4298-4GU	i5-2520M	4GBx1	12.5" HD <i>Outdoor</i>	720p	320G 7200	Optional	Opt Intel 6205	Gobi 3000		6		vPro G	Pro 64
4298-4CU	i5-2520M	4GBx1	12.5" HD <i>Outdoor</i>	720p	128G SSD	Optional	Opt Intel 6205	WWAN upg		6		vPro G	Pro 64
4298-26U	i7-2620M	2GBx2	12.5" HD <i>Multi</i>		320G 7200	Optional	Opt Intel 6300 ²⁸	WWAN upg		6	6	vPro G	Pro 64
4298-4TU	i7-2640M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt Intel 6205	WWAN upg		6		vPro G	Pro 64
• A depot repair service 3-year limited warranty • Microsoft® Office 2010 Product Key Ready (O10PKR)													
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology								Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW)				
Memory	8GB max ⁷ / PC3-10600 1333MHz 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) Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3												
mSATA™ SSD	None												
Widescreen display	Outdoor: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS MultiTouch: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotate and swivel hinge, power, reset, and rotation buttons on display bottom Some: HD720p resolution, wider view angle, low light sensitive, fixed focus												
Camera	Some: HD720p resolution, wider view angle, low light sensitive, fixed focus												
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)												
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys								Supports ThinkVantage® technologies				
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass								ThinkPad Ultrabase Series 3				
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch								• Provides desktop expansion and cable management for X220 and X220 Tablet				
ThinkLight™	None								• Easily connects to the bottom of the X220 or X220 Tablet for traveling				
Dimensions ³	without UltraBase; 3-cell: 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm								• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:				
Weight ²	3-cell: from 3.67 lb (1.66kg); 6-cell: from 3.97 lb (1.80kg)								- DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292				
Case material	Display cover: Magnesium + PCABS; Bottom: Magnesium alloy								- Serial ATA Hard Drive Bay Adapter III 43N3412				
Battery - type	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery								Disks supported (some):				
Extended Battery	Some: Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280)								• 128GB 2.5" SSD II 0A33984				
Battery - life ¹⁰	3-cell: up to 4.0 hr; 6-cell: up to 8.8 hr; slice battery: up to 9.0 hr; 6-cell plus slice battery: up to 17.8 hr								• 500GB Disk 7200 rpm 43N3423				
Chipset	Mobile Intel QM67 Express Chipset								Other features:				
Ultrabase	Option: ThinkPad Ultrabase Series 3 (see right side)								• Power button (front)				
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)								• Security key lock, security keyhole				
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)								• Analog VGA DB-15 monitor port				
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)								• DisplayPort (supports single-link DVI-D via cable 45J7915)				
PCle Mini Card WLAN ⁴	Two PCI Express Mini Card slots Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider								• Four USB 2.0 ports				
WWAN									• Gigabit ethernet (RJ-45) port				
Modem	None								• Microphone in and headphone out				
Bluetooth™	Bluetooth 3.0 wireless, LED indicator								• Requires 65W or 90W AC adapter				
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1								• 1.39 lb; 630g				
Intel AMT	Intel Active Management Technology (iAMT)												
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack								65-watt AC Adapter				
Security	Power-on password, hard disk password, supervisor password, security keyhole								ENERGY STAR® 5.0-compliant				
Security chip	Trusted Platform Module, TCG 1.2-compliant								ROHS-compliant				
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip								International Warranty Service ¹⁷				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available								24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				

See footnotes for more detailed information

US model(s) announced May 3, May 10, July 12, or October 4, 2011

US model withdrawn effective November 30, 2011

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(CMT1-4) November 2011

ThinkPad® X220 Tablet (4299) - Onsite

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Battery cells	Ext Battery cells	Global Intel vPro GMP (P)	Pre-load
4299-36U	i5-2520M	4GBx1	12.5" HD Outdoor	720p	320G 7200	DVD±RW	UltraB	Intel 6205 ²⁸	upg	Fing	Blue	6		vPro G P	Pro 64
4299-35U	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro G P	Pro 64
< 4299-34U	i7-2620M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
< 4299-33U	i7-2620M	4GBx1	12.5" HD Outdoor	720p	320G 7200	DVD±RW	UltraB	Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
< 4299-32U	i7-2620M	4GBx1	12.5" HD Outdoor	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro G P	Pro 64
< 4299-2ZU	i7-2620M	4GBx1	12.5" HD Multi	720p	128G SSD			Intel 6205	upg	Fing	Blue	6		vPro G P	Pro 64
4299-2YU	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro	Pro 64
4299-2XU	i5-2520M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro	Pro 64
4299-2WU	i5-2520M	4GBx1	12.5" HD Outdoor		320G 7200			Intel 6205	upg			6		vPro	Pro 64
4299-2VU	i5-2520M	4GBx1	12.5" HD Multi		320G 7200			Intel 6205	upg			6		vPro	Pro 64
4299-2UU	i5-2520M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
4299-2TU	i5-2520M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	upg	Fing	Blue	6		vPro	Pro 64
< 4299-2SU	i7-2620M	4GBx1	12.5" HD Outdoor	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro G P	Pro 64
< 4299-2RU	i7-2620M	4GBx1	12.5" HD Multi	720p	320G 7200			Intel 6205	upg	Fing	Blue	6	6	vPro G P	Pro 64
4299-27U	i5-2520M	2GBx1	12.5" HD Outdoor		320G 7200			Intel 6205	upg	Fing	Blue	6		vPro G P	Pro 64
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW)				
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 3.0Gb/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														
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom														
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch None														
Dimensions ³ Weight ² Case material Battery - type Extended Battery Battery - life ¹⁰	<i>without UltraBase; 3-cell:</i> 12.0" x 9" 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 Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery <i>Some:</i> Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280) <i>3-cell:</i> up to 4.0 hr; <i>6-cell:</i> up to 8.8 hr; <i>slice battery:</i> up to 9.0 hr; <i>6-cell plus slice battery:</i> up to 17.8 hr														
Chipset	Mobile Intel QM67 Express Chipset														
Ultrabase Multicard Reader ExpressCard Ports	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)														
PCIe Mini Card WLAN ⁴ WWAN 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 <i>Some:</i> Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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> UPEK 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	<i>Some:</i> UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri, excluding holidays, next business day response / service upgrades²² available														

See footnotes for more detailed information

US models announced March 22, 2011

US models withdrawn effective November 30, 2011

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(CMT1-3) November 2011

ThinkPad® X220 Tablet (4299) - Onsite (May 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Battery cells	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
4299-4BU	i5-2520M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt	Intel 6205 ²⁸	WWAN upg	6		vPro	G P	Pro 64
4299-4CU	i5-2520M	4GBx1	12.5" HD <i>Outdoor</i>	720p	128G SSD	Optional	Opt	Intel 6205	WWAN upg	6		vPro	G P	Pro 64
4299-26U	i7-2620M	2GBx2	12.5" HD <i>Multi</i>		320G 7200	Optional	Opt	Intel 6300 ²⁸	WWAN upg	6	6	vPro	G P	Pro 64
4299-4TU	i7-2640M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt	Intel 6205	WWAN upg	6		vPro	G P	Pro 64

• **Part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty**
 • **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW)				
Memory	8GB max ⁷ / PC3-10600 1333MHz 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 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3													
mSATA™ SSD	None													
Widescreen display	<i>Outdoor:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> 12.5" (317.5mm) HD (1366x768) TFT color , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotate and swivel hinge , power, reset, and rotation buttons on display bottom													
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus													
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); 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 ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 • 500GB Disk 7200 rpm 43N3423				
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch None													
Dimensions ³ Weight ²	<i>without UltraBase; 3-cell:</i> 12.0" x 9" 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													
Case material Battery - type Extended Battery Battery - life ¹⁰	Lithium Ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery <i>Some:</i> Slim external Lithium Ion 6-cell battery (ThinkPad Battery 19+, 0A36280) <i>3-cell:</i> up to 4.0 hr; <i>6-cell:</i> up to 8.8 hr; <i>slice battery:</i> up to 9.0 hr; <i>6-cell plus slice battery:</i> up to 17.8 hr													
Chipset	Mobile Intel QM67 Express Chipset													
Ultrabase Multicard Reader ExpressCard Ports	<i>Option:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	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 Wireless WAN upgradable None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 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 UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri, excluding holidays, next business day response / service upgrades ²² available									65-watt AC Adapter ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				

See footnotes for more detailed information
 US model(s) announced May 3, May 10, July 12, or October 4, 2011
 US model withdrawn effective November 30, 2011

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 (CMT1-5) November 2011

ThinkPad® X220 Tablet Accessories

Personal Systems Reference (PSREF)

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Slim 9.5mm

<i>Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3</i>			
Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann	08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann	06/23/09

Storage and removable storage

160GB 2.5" Intel Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0G/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

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

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Wireless WAN (Mini PCI Express)

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

ThinkPad Expansion

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

Keyboard

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

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06
ExpressCard Gemplus Smart Card Reader	41N3043	ann	06/27/06

Multimedia

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

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

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

Batteries

ThinkPad Battery 52 (3-cell)	0A36285	ann	03/22/11
ThinkPad Battery 52+ (6-cell)	0A36286	ann	03/22/11
ThinkPad Battery 19+ (6-cell, Slim External)	0A36280	ann	03/01/11
ThinkPad External Battery Charger ^{44, 47}	40Y7625	ann	09/20/05

⁴⁴ Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

⁴⁷ Only supports ThinkPad Battery 52 (3-cell) 0A36285

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

<i>Up to 12" widescreen models:</i>			
ThinkPad 12W Case Sleeve	51J0476	ann	08/18/09
ThinkPad X220 Tablet Sleeve	0A33883	ann	03/22/11

<i>Up to 13.3" widescreen models:</i>			
ThinkPad Ultraportable Case	41U5062	ann	05/13/08

<i>Up to 15.6" widescreen models:</i>			
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

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

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann	11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort Monitor Cable 0A36537.

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo® ThinkPad X1 with
ThinkPad Battery 39+ (6-cell slice)
0A36279

ThinkPad®



Lenovo ThinkPad X1



Lenovo ThinkPad X1



Lenovo ThinkPad X1



Lenovo ThinkPad X1



Lenovo ThinkPad X1

ThinkPad® X1 (1286) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Ext Battery cells	Intel AMT	Intel vPro	Preload(mm/yy)	Ann Date
1286-2XU	i7-2620M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300	WWAN upg	Finger	BT	No	iAMT	No	Pro 32	08/11
1286-3LU	i7-2640M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300	WWAN upg	Finger	BT	No	iAMT	vPro	Pro 64	12/11

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

Positioning Processor	<i>Premiere mobility, performance, and style; one spindle</i> Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology	Preloaded operating system²⁰ <i>Some:</i> Genuine Windows® 7 Professional 32 <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● Access Connections™● Fingerprint Software (fingerprint models)● Password Manager (fingerprint models)● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Lenovo® SimpleTap Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo® installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711)	
Optical Disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/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	
mSATA™ SSD	None	
Display	(Premium) 13.3" (338mm) HD (1366x768) TFT color , anti-glare display with glossy infinity Corning® Gorilla ³ Glass LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution:</i> 2560x1600 (Mini-DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz	
Keyboard	6 row, ThinkVantage® button, LED backlit, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³	
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	13.3W" (WxDxH): 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm	
Weight ²	<i>Integrated battery:</i> from 3.73 lb (1.69kg); <i>integrated plus slice battery:</i> from 4.52 lb (2.05kg)	
Case material	<i>Display cover:</i> Magnesium/Aluminum + PC/ABS; <i>Bottom:</i> Magnesium/Aluminum	
Standard Battery	Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery	
Extended Battery	None	
Battery - life ¹⁰	<i>integrated battery:</i> up to 5.2 hr; <i>integrated plus slice battery:</i> up to 10.0 hr	
Chipset	Mobile Intel QM67 Express Chipset	
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)	
ExpressCard	None	
Ports	One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express® Mini Card slots	
PCIe WLAN ⁴	11a/b/g/n ²⁸ , PCIe Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3	
PCIe WWAN	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speaker, 1 watt 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited Warranty ¹²	1-year - depot repair service / service upgrades ²² available	Supports ThinkVantage technologies 90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-X1 sheet; For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model(s) announced August 2 or December 13, 2011

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ThinkPad® X1 (1291) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ^a rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue tooth	Ext Battery cells	Intel AMT	Intel vPro	Preload
1291-2UU	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	No	iAMT	vPro	Prem 64
1291-2TU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6205	Gobi 3000	selectable	Finger	BT	No	iAMT	vPro	Pro 64
1291-27U	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300	WWAN upg	None	Finger	BT	No	iAMT	vPro	Pro 64
1291-26U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	No	iAMT	vPro	Pro 64
1291-22U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	BT	6	iAMT	vPro	Pro 64
1291-3CU	i5-2520M	8GBx1	13.3" HD Prem	720p	160G SSD	Intel 1000	WWAN upg	None	Finger	BT	No	No	No	Pro 64
1291-3DU	i3-2350M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 1000	WWAN upg	None	Finger	BT	No	No	No	Pro 64

- 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>Premiere mobility, performance, and style; one spindle</i> Intel® Core™ i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system ²⁰ <i>Some:</i> Genuine Windows® 7 Home Premium 64 <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) ● Rescue and Recovery™ ● Access Connections™ ● Fingerprint Software (fingerprint models) ● Password Manager (fingerprint models) ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Lenovo® SimpleTap Preloaded applications ¹⁴ (only some listed) ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Windows Live™ Essentials ● Microsoft® Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo® installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711)	
Optical Disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/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	
mSATA™ SSD	None	
Display	(Premium) 13.3" (338mm) HD (1366x768) TFT color, anti-glare display with glossy infinity Corning® Gorilla® Glass LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution:</i> 2560x1600 (Mini-DisplayPort) @60Hz; 1920x1200 (HDMI) @60Hz	
Keyboard	6 row, ThinkVantage® button, LED backlit, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar ¹³	
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch	
ThinkLight™	None	
Dimensions ³	<i>13.3W" (WxDxH):</i> 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm	
Weight ²	<i>Integrated battery:</i> from 3.73 lb (1.69kg); <i>integrated plus slice battery:</i> from 4.52 lb (2.05kg)	
Case material	<i>Display cover:</i> Magnesium/Aluminum + PC/ABS; <i>Bottom:</i> Magnesium/Aluminum	
Standard Battery	Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery	
Extended Battery	<i>Some:</i> Lithium Polymer 6-cell slice battery (ThinkPad Battery 39+, 0A36279), RapidCharge	
Battery - life ¹⁰	<i>integrated battery:</i> up to 5.2 hr; <i>integrated plus slice battery:</i> up to 10.0 hr	
Chipset	Mobile Intel QM67 Express Chipset	
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)	
ExpressCard	None	
Ports	One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express® Mini Card slots	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n ²⁸ , 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	<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 first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	<i>Some:</i> Intel Active Management Technology (iAMT)	
Audio support	HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speaker, 1 watt 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited Warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	Supports ThinkVantage technologies 90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-X1 sheet; For ThinkPlus™ service upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US model(s) announced May 17, May 24, August 2, or October 4, 2011

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Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
1293-3EU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6205 ²⁸	WWAN upg		Finger	Blue		vPro		Prem 64
1293-3DU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300 ²⁸	WWAN upg		Finger	Blue		vPro	G	Pro 64
1293-3CU	i5-2520M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	Gobi 3000	selectable	Finger	Blue		vPro		Pro 64
1293-2DU	i5-2520M	8GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300	WWAN upg		Finger	Blue		vPro		Pro 64
1293-2CU	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg		Finger	Blue		vPro	G	Pro 64
1293-2BU	i5-2520M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg		Finger	Blue		vPro	G	Pro 64
1293-23U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg		Finger	Blue	6	vPro	G	Pro 64
1293-22U	i5-2520M	8GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg		Finger	Blue	6	vPro	G	Pro 64

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere mobility, performance, and style; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo SimpleTap Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711)		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/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		
mSATA™ SSD	None		
Widescreen display	(Premium) 13.3" (338mm) HD (1366x768) TFT color, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio HD720p resolution, wide view angle, low light sensitive, fixed focus		
Camera			
Graphics	Intel HD Graphics 3000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution:</i> 2560x1600 (Mini-DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz		
Keyboard TrackPoint®	6 row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys		
Touchpad	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³		
ThinkLight™	UltraNav™, buttonless touchpad below keyboard, multi-touch		
Dimensions ³	None		
Weight ²	13.3W" (WxDxH): 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm <i>Integrated battery:</i> from 3.73 lb (1.69kg); <i>integrated plus slice battery:</i> from 4.52 lb (2.05kg)		
Case material	<i>Display cover:</i> Magnesium/Aluminum + PC/ABS; <i>Bottom:</i> Magnesium/Aluminum		
Standard Battery	Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery <i>Some:</i> Lithium Polymer 6-cell slice battery (ThinkPad Battery 39+, 0A36279), RapidCharge <i>Integrated battery:</i> up to 5.2 hr; <i>integrated plus slice battery:</i> up to 10.0 hr		
Extended Battery Battery - life ¹⁰			
Chipset	Mobile Intel QM67 Express Chipset		
Multicard reader	4-in-1 reader (SD, SDHC, SDXC, MMC)		
ExpressCard	None		
Ports	One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)		
PCIe Mini Card WLAN ⁴	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		
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 <i>Some:</i> User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider		Supports ThinkVantage® technologies
Modem	None		90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speakers, 1 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		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-X1 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

US models announced May 24, 2011; previous models on May 17, 2011

ThinkPad® X1 (1294) - Onsite

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Finger print reader	Blue-tooth	Ext Battery cells	Intel vPro	Global (G) GMP (P)	Pre-load
1294-3DU	i5-2520M	4GBx1	13.3" HD Prem	720p	160G SSD	Intel 6300 ²⁸	WWAN upg	None	Finger	Blue		vPro	G P	Pro 64
1294-2CU	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	None	Finger	Blue		vPro	G P	Pro 64
1294-2BU	i5-2520M	4GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg	None	Finger	Blue		vPro	G P	Pro 64
1294-23U	i5-2520M	4GBx1	13.3" HD Prem	720p	320G 7200	Intel 6205	WWAN upg	None	Finger	Blue	6	vPro	G P	Pro 64
1294-22U	i5-2520M	8GBx1	13.3" HD Prem	720p	128G SSD	Intel 6205	WWAN upg	None	Finger	Blue	6	vPro	G P	Pro 64

- These models are part of the Global Models Plus program with limited onsite service²⁴ 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere mobility, performance, and style; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo SimpleTap Preloaded applications¹⁴ (all OSes; only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711)		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/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		
mSATA™ SSD	None		
Widescreen display	(Premium) 13.3" (338mm) HD (1366x768) TFT color, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort (supports VGA analog monitor via Mini-DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; <i>Max external resolution:</i> 2560x1600 (Mini DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz		
Keyboard TrackPoint® Touchpad ThinkLight™	6 row, ThinkVantage button, LED backlit, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ UltraNav™, buttonless touchpad below keyboard, multi-touch None		
Dimensions ³ Weight ² Case material Standard Battery	<i>13.3W" (WxDxH):</i> 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm <i>Integrated battery:</i> from 3.73 lb (1.69kg); <i>integrated plus slice battery:</i> from 4.52 lb (2.05kg) <i>Display cover:</i> Magnesium/Aluminum + PC/ABS; <i>Bottom:</i> Magnesium/Aluminum Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery		
Extended Battery Battery - life ¹⁰	<i>Some:</i> Lithium Polymer 6-cell slice battery (ThinkPad Battery 39+, 0A36279), RapidCharge <i>Integrated battery:</i> up to 5.2 hr; <i>integrated plus slice battery:</i> up to 10.0 hr		
Chipset	Mobile Intel QM67 Express Chipset		
Multicard reader ExpressCard Ports	4-in-1 reader (SD, SDHC, SDXC, MMC) None One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)		
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support Security Security chip Fingerprint reader	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 Wireless WAN upgradable None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speakers, 1 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 Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-year battery, limited onsite service²⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

Supports ThinkVantage® technologies		
90-watt AC Adapter (RapidCharge) ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378		
For compatible accessories, please go to O-X1 sheet;		
For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet		

See footnotes for more detailed information

US models announced May 24, 2011; previous models on May 17, 2011

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ThinkPad® X1 Accessories

Personal Systems Reference (PSREF)

Memory⁶⁵

4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10
⁶⁵ ThinkPad X1 has only one SO-DIMM socket and doesn't support adding additional memory.

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
 USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
 USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11
 USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11
 Lenovo Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

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

ThinkPad Expansion

USB 2.0 Port Replicator with Digital Video 0A33942 ann 03/22/11
 Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09

Keyboard

TrackPoint Cap Collection 73P2698 ann 12/16/03
 Ultralim Plus Wireless Keyboard and Mouse⁵² 0A34032 ann 04/05/11
 USB Numeric Keypad 33L3225 ann 05/01/00
 Preferred Pro USB Keyboard 73P5220 ann 06/21/05
 Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
 ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
 Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
 Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

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

Mouse

Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
 Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
 ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
 Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
 ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
 ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08
 Lenovo Wireless Laser Mouse⁵² 0A36188 ann 12/20/11

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

Multimedia

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

Modem

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

Security

Lenovo Security Cable Lock 57Y4303 ann 08/24/10
 USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

Batteries

ThinkPad Battery 39+ (6-cell slice) 0A36279 ann 05/24/11
 ThinkPad External Battery Charger⁴⁴ 40Y7625 ann 09/20/05

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

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter⁶³ 40Y7696 ann 01/05/06

⁶³ *ThinkPad 65W AC Adapter 40Y7696* supports "Rapid Charge" only when ThinkPad X1 system is off.

ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05

ThinkPad 65W AC Adapter with USB Hub 57Y4600 ann 09/07/10

90W Ultralim AC/DC Combo Adapter 41R4493 ann 09/22/09

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

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

• iPod and iPhone Charge Tip (L10a) 41R4481 ann 12/18/07

• Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 13.3" widescreen models:

ThinkPad Ultraportable Case 41U5062 ann 05/13/08

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

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

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors⁶⁴

ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09

ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 ann 11/11/08

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)⁶⁹ 2448MB6 ann 09/13/11

ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 ann 10/20/09

ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 ann 10/20/09

ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)⁶⁹ 2572MB6 ann 09/13/11

ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)⁶⁹ 4420MB2 ann 09/13/11

Lenovo LS2421p Wide 23.6" (VGA, HDMI) 4015LS1 ann 08/02/11

⁶⁴ Requires the *Lenovo Mini-DisplayPort to VGA Monitor Cable 0A36536*

⁶⁹ DisplayPort cable is not included.

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

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09

Lenovo Mini-DisplayPort to VGA Monitor Cable 0A36536 ann 05/17/11

ThinkVision Soundbar 45K1263 ann 09/16/08

Lenovo Security Cable Lock 57Y4303 ann 08/24/10

Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad T series Multiple Monitor Configurations with *ThinkPad Mini Dock Series 3 (4337)* using NVIDIA® Optimus™ technology

For more information see: <http://www.lenovo.com/support/thinkpad/optimus-monitors>

Triple Monitor configurations: ThinkPad T420, T420s, and T520 Dual Core with "ThinkPad Mini Dock Series 3 (4337)"

ThinkPad T420, T420s, T520 Dual Core			ThinkPad Mini Dock Series 3 (4337)		
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort (2560 x 1600)	Dock DVI-D (1920 x 1200)
1st	2nd	3rd			
1st			2nd	3rd	
1st			2nd		3rd
1st		2nd	3rd		
1st		2nd		3rd	
1st		2nd			3rd

Quad Monitor configurations: ThinkPad T420, T420s, and T520 Dual Core with "ThinkPad Mini Dock Series 3 (4337)"

ThinkPad T420, T420s, T520 Dual Core			ThinkPad Mini Dock Series 3 (4337)		
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort # 1 (2560 x 1600)	Dock DVI-D # 1 (1920 x 1200)
1st		2nd	3rd	4th	
1st		2nd	3rd		4th
1st		2nd		3rd	4th
1st			2nd	3rd	4th

Rear view of *ThinkPad Mini Dock Series 3 (4337)*



ThinkPad Mini Dock Series 3 - 90W 433710U

ThinkPad® Multiple Monitor Configurations with *Mini Dock Plus Series 3* Personal Systems Reference (PSREF)

ThinkPad T and W series Multiple Monitor Configurations with *ThinkPad Mini Dock Plus Series 3 (4338)* using NVIDIA® Optimus™ technology

For more information see: <http://www.lenovo.com/support/thinkpad/optimus-monitors>

Triple Monitor configurations: ThinkPad T420, T420s, T520, and W520 with "ThinkPad Mini Dock Plus Series 3 (4338)"

ThinkPad T420, T420s, T520, W520			ThinkPad Mini Dock Plus Series 3 (4338)				
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort # 1 (2560 x 1600)	Dock DVI-D # 1 (1920 x 1200)	Dock DisplayPort # 2 (2560 x 1600)	Dock DVI-D # 2 (1920 x 1200)
1st	2nd	3rd					
1st			2nd	3rd			
1st			2nd		3rd		
1st			2nd			3rd	
1st			2nd				3rd
1st		2nd	3rd				
1st		2nd		3rd			
1st		2nd			3rd		
1st		2nd				3rd	
1st		2nd					3rd
1st				2nd		3rd	
1st				2nd			3rd
1st					2nd	3rd	
1st					2nd		3rd

Quad Monitor configurations: ThinkPad T420, T420s, and T520 with "ThinkPad Mini Dock Plus Series 3 (4338)"

ThinkPad T420, T420s, T520			ThinkPad Mini Dock Plus Series 3 (4338)				
ThinkPad Display (1920 x 1080)	ThinkPad VGA (2048 x 1600)	ThinkPad DisplayPort (2560 x 1600)	Dock VGA (2048 x 1536)	Dock DisplayPort # 1 (2560 x 1600)	Dock DVI-D # 1 (1920 x 1200)	Dock DisplayPort # 2 (2560 x 1600)	Dock DVI-D # 2 (1920 x 1200)
1st		2nd	3rd	4th			
1st		2nd	3rd		4th		
1st		2nd	3rd			4th	
1st		2nd	3rd				4th
1st		2nd		3rd			4th
1st		2nd			3rd		4th
1st		2nd			3rd	4th	
1st			2nd	3rd		4th	
1st			2nd	3rd			4th
1st			2nd		3rd	4th	
1st			2nd		3rd		4th

Rear view of *ThinkPad Mini Dock Plus Series 3 (4338)*



ThinkPad Mini Dock Plus Series 3 - 90W 433810U
ThinkPad Mini Dock Plus Series 3 - 170W 433830U

Compatible with ThinkPad T420, T420s, and T520 Dual Core
 Compatible with ThinkPad T420, T420s, T520, and W520

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:

<http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml>

TopSeller service upgrade options for ThinkPad L/T/W/X Series

ThinkPad L/T/W & X (excluding tablets) Series with 1-year Depot warranty

3 YEAR Depot Warranty	04W8692
3 YEAR Depot Warranty & ThinkPad Protection	04W8694
3 YEAR Onsite Warranty	04W8693
3 YEAR Onsite Warranty & ThinkPad Protection	04W8695

ThinkPad L/T/W & X (excluding tablets) Series with 3-year Depot warranty

3 YEAR Depot Warranty & ThinkPad Protection	04W8697
3 YEAR Onsite Warranty	04W8696
3 YEAR Onsite Warranty & ThinkPad Protection	04W8698

ThinkPad X Series Tablet with 1-year Depot warranty

3 YEAR Depot Warranty & ThinkPad Protection	04W8781
3 YEAR Onsite Warranty & ThinkPad Protection	04W8782

ThinkPad X Series Tablet with 3-year Depot warranty

3 YEAR Depot Warranty & ThinkPad Protection	04W8700
3 YEAR Onsite Warranty	04W8699
3 YEAR Onsite Warranty & ThinkPad Protection	04W8701

ThinkPad X1 notebook with 3-year Depot warranty

3 YEAR Depot Warranty with Battery Replacement	04W8780
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	04W8778
3 YEAR Onsite Warranty with Battery Replacement	04W8777
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W8779

ThinkPad X120e/X130e notebooks with 1-year Depot warranty

3 YEAR Depot Warranty	04W8706
3 YEAR Depot Warranty & ThinkPad Protection	04W8708
3 YEAR Onsite Warranty	04W8707
3 YEAR Onsite Warranty & ThinkPad Protection	04W8709

TopSeller Priority Support

- 24x7 support with priority routing and advanced level technicians

ThinkPad L/T/W/X Series notebooks with 1-year or 3-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	04W8720
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* Covered machine must have concurrent warranty coverage.

Partial list of Lenovo® ThinkPlus Services²² for ThinkPad notebooks

 For more information see: http://www.lenovo.com/services_warranty/us/en/index.html

ThinkPlus service upgrade options for ThinkPad W/X series	ThinkPlus Priority Support for enterprise customers
ThinkPad X120e/X130e notebook with 1-year Depot warranty 2 YEAR Depot Warranty 45K5971 3 YEAR Depot Warranty 45K5972 4 YEAR Depot Warranty 0A34460 1 YEAR Onsite Warranty 45K5968 2 YEAR Onsite Warranty 45K5969 3 YEAR Onsite Warranty 45K5970 4 YEAR Onsite Warranty 0A34462	• 24x7 support with priority routing and advanced level technicians ThinkPad notebook with 1-year Depot warranty Add to 3-year warranty coverage - 3-year Priority Support* 45J9094
ThinkPad W/X series notebook with 1-year Depot warranty 2 YEAR Depot Warranty 41C9169 3 YEAR Depot Warranty 41C9170 4 YEAR Depot Warranty 41C9172 5 YEAR Depot Warranty 41C9174 1 YEAR Onsite Warranty 41C9166 2 YEAR Onsite Warranty 41C9167 3 YEAR Onsite Warranty 41C9168 4 YEAR Onsite Warranty 41C9171 5 YEAR Onsite Warranty 41C9173	ThinkPad notebook with 3-year Depot warranty Add to 3-year warranty coverage - 3-year Priority Support* 45J9095 Add to 4-year warranty coverage - 4-year Priority Support* 45J9096 Add to 5-year warranty coverage - 5-year Priority Support* 45J9097 Add to 3-year warranty coverage - 3-year Priority Support 4-hour response* 45J9101 Add to 4-year warranty coverage - 4-year Priority Support 4-hour response* 45J9102 Add to 5-year warranty coverage - 5-year Priority Support 4-hour response* 45J9103
ThinkPad W/X series notebook with 3-year Depot warranty 4 YEAR Depot Warranty 41C9178 5 YEAR Depot Warranty 41C9180 3 YEAR Onsite Warranty 41C9176 4 YEAR Onsite Warranty 41C9177 5 YEAR Onsite Warranty 41C9179	ThinkPad notebook with 3-year Onsite (GMP) warranty Add to 3-year warranty coverage - 3-year Priority Support* 45J9098 Add to 4-year warranty coverage - 4-year Priority Support* 45J9099 Add to 5-year warranty coverage - 5-year Priority Support* 45J9100 Add to 3-year warranty coverage - 3-year Priority Support 4-hour response* 45J9104 Add to 4-year warranty coverage - 4-year Priority Support 4-hour response* 45J9105 Add to 5-year warranty coverage - 5-year Priority Support 4-hour response* 45J9106
ThinkPad W/X series notebook with 3-year Onsite warranty 4 YEAR Onsite Warranty 12X5630 5 YEAR Onsite Warranty 43R2162	ThinkPad Workstation notebook with 1-year Depot warranty Add to 3-year warranty coverage - 3-year Priority Support* 45J9107
ThinkPad X1 notebook with 3-year Depot warranty 3 YEAR Depot Warranty with Battery Replacement 04W7783 3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection 04W7785 3 YEAR Onsite Warranty with Battery Replacement 04W8259 3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection 04W8261	ThinkPad Workstation notebook with 3-year Depot warranty Add to 3-year warranty coverage - 3-year Priority Support* 45J9108 Add to 4-year warranty coverage - 4-year Priority Support* 45J9109 Add to 5-year warranty coverage - 5-year Priority Support* 45J9110 Add to 3-year warranty coverage - 3-year Priority Support 4-hour response* 45J9114 Add to 4-year warranty coverage - 4-year Priority Support 4-hour response* 45J9115 Add to 5-year warranty coverage - 5-year Priority Support 4-hour response* 45J9116
ThinkPad X1 notebook with 3-year Onsite warranty 3 YEAR Onsite Warranty with Battery Replacement 04W7787 3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection 04W7789	ThinkPad Workstation notebook with 3-year Onsite (GMP) warranty Add to 3-year warranty coverage - 3-year Priority Support* 45J9111 Add to 4-year warranty coverage - 4-year Priority Support* 45J9112 Add to 5-year warranty coverage - 5-year Priority Support* 45J9113 Add to 3-year warranty coverage - 3-year Priority Support 4-hour response* 45J9117 Add to 4-year warranty coverage - 4-year Priority Support 4-hour response* 45K1520 Add to 5-year warranty coverage - 5-year Priority Support 4-hour response* 45K1521
* Covered machine must have concurrent warranty coverage.	
ThinkPlus service upgrade options for ThinkPad T/L series	
ThinkPad T/L series notebook with 1-year Depot warranty 2 YEAR Depot Warranty 45K5971 3 YEAR Depot Warranty 45K5972 4 YEAR Depot Warranty 45K5974 5 YEAR Depot Warranty 45K5976 1 YEAR Onsite Warranty 45K5968 2 YEAR Onsite Warranty 45K5969 3 YEAR Onsite Warranty 45K5970 4 YEAR Onsite Warranty 45K5973 5 YEAR Onsite Warranty 45K5975	
ThinkPad T/L series notebook with 3-year Depot warranty 4 YEAR Depot Warranty 45K6023 5 YEAR Depot Warranty 45K6025 3 YEAR Onsite Warranty 45K6021 4 YEAR Onsite Warranty 45K6022 5 YEAR Onsite Warranty 45K6024	
ThinkPad T/L series notebook with 3-year Onsite warranty 4 YEAR Onsite Warranty 45K6038 5 YEAR Onsite Warranty 43R2162	

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.

² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.

³ **Thinness** may vary at certain points on the system.

⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.

⁵ **TAA:** ThinkPad notebook is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.

⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.

⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.

⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.

⁹ **CD/DVD drive speeds** list maximum rates; rates are variable and are often less than the maximum.

¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 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.

¹¹ **External monitor:** This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.

¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

¹³ **Internet access not included.**

¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

¹⁶ **Activating Verizon Wireless Service:** Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service, airtime, and early termination charges may apply. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.

¹⁷ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

¹⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For ThinkPad notebooks with EasyServ or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.

¹⁹ **EasyServ depot repair service:** In the United States call 1-800-426-7378. The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.

²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

²¹ **For combination drives**, maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.

²² **ThinkPlus 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 ThinkPlus terms and conditions for complete details and restrictions.

²³ **Activating AT&T Wireless Service:** Requires separate agreement with AT&T, subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

²⁴ **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

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

²⁷ **Based on IEEE 802.11a and 802.11b.** A customer can not upgrade to a different wireless Mini PCI adapter due to FCC regulations. Security screws prevent removal of this adapter. This wireless LAN product has been designed to permit legal operation world-wide in regions which it is approved. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

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

³² **Wireless:** Based on IEEE 802.11a, 802.11b, and 802.11g respectively. An adapter with 11a/b, 11b/g, or 11a/b/g can communicate on either/any of these listed formats respectively, the actual connection will be based on the access point to which it connects.

³⁶ **Wireless upgradable** allows the system to be wireless-enabled with an optional wireless Mini PCI or Mini PCI Express card. Designed to operate only with Lenovo options.

³⁷ **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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December 2011
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Personal Systems Reference Lenovo® ThinkPad® Edge Notebooks

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Lenovo ThinkPad Edge E220s

ThinkPad® Edge E220s 5038 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Finger print reader	Blue-tooth	Battery cells	Preload
5038-2NU	i7-2617M	4GBx1	12.5" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	8	Pro 64
5038-2MU	i7-2617M	4GBx1	12.5" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	8	Prem 64
5038-2LU	i5-2537M	4GBx1	12.5" HD	720p	320G 7200	TP 11b/g/n	None	None	Finger	Blue	8	Prem 64
5038-2KU	i5-2537M	4GBx1	12.5" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	8	Pro 64
5038-4DU	i3-2357M	4GBx1	12.5" HD	720p	320G 7200	TP 11b/g/n	None	None	Finger		8	Prem 64
5038-4EU	i3-2357M	4GBx1	12.5" HD	720p	320G 7200	TP 11b/g/n	None	None	Finger		8	Pro 64
5038-4MU	i5-2467M	4GBx1	12.5" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	8	Pro 64
5038-55U	i5-2467M	4GBx1	12.5" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	8	Prem 64
5038-56U	i5-2467M	4GBx1	12.5" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	8	Pro 64
5038-57U	i3-2367M	4GBx1	12.5" HD	720p	320G 7200	TP 11b/g/n	None	None	Finger		8	Pro 64
5038-6KU	i5-2467M	4GBx1	12.5" HD	720p	500G 5400	Intel 1000	None	None	Finger	Blue	8	Pro 64

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

Positioning Processor	<i>Elegant design with quality, reliability, and portability for SMB customers; one spindle</i> Intel® Core™ i3-2357M processor (dual-core, 1.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Hyper-Threading technology Intel Core i3-2367M processor (dual-core, 1.40GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Hyper-Threading technology Intel Core i5-2467M processor (dual-core, 1.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.30GHz), HT technology Intel Core i5-2537M processor (dual-core, 1.40GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.30GHz), HT technology Intel Core i7-2617M processor (dual-core, 1.50GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.60GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe Acrobat® X Standard (bundled with Microsoft Office)
Memory	4GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket		
Optical	None		
SATA disk	<i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/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		
mSATA	None		
Widescreen display	12.5" (317.5mm) HD (1366x768) color , anti-glare display with glossy infinity glass, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI port)@60Hz</i>		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touch pad	UltraNav™, buttonless touchpad below keyboard, Tap Zones, scrolling regions, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	12.5W" (WxDxH): 12.32" x 8.41" x 0.86"; 313mm x 213.5mm x 21.9mm		
Weight ²	starting at 3.23 lb (1.46kg)		
Case color	Moss Black soft touch finish, authentic metal accents		
Case material	Magnesium/Aluminum + PPS		
Battery - type ³⁷	Integrated Lithium Ion 8-cell, 1000 cycle battery		
Battery - life ¹⁰	up to 6.0 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard/34	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		Supports ThinkVantage® technologies
PCIe Mini Card	Two PCI Express Mini Card slots		65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
WWAN	None		
Modem	None		
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless		
Ethernet	Realtek® RTL8111E Gigabit Network Connection		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Conexant 20671 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	None		
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor		For compatible accessories, please go to O-E220-S sheet; For ThinkPlus™, ²² service upgrade options, please go to S-EDGE sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information

US model(s) announced December 20, 2011; previous model(s) on April

19, June 21, July 5 or October 4, 2011

US model(s) withdrawn effective December 2011

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ThinkPad® Edge E220s Accessories

Personal Systems Reference (PSREF)

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB 2.0 Port Replicator with Digital Video	0A33942	ann 03/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
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
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

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	41U5008	ann 01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
Lenovo Optical Mouse A6010 (black)	57Y6255	
Lenovo Wireless Mouse N30B (black)	55Y9360	

Security

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Power adapters

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

Up to 13.3" widescreen models:

ThinkPad Ultraportable Case	41U5062	ann 05/13/08
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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

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

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad Edge 14"



Lenovo ThinkPad Edge 14"
(Glossy black model)



Lenovo ThinkPad Edge 14"



ThinkPad In-Ear Headphones with mic
57Y4488



Lenovo ThinkPad Edge 14"

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Preload	Avail date
0579-22U	i3-370M	2.40	2GB	14.0" HD	2.0M	250G 5400	TP 11b/g/n	None	None	Matte black	None	None	Pro 64	May 11
0579-66U	i5-540M	2.53	2GBx2	14.0" HD	0.3M	500G 5400	TP 11b/g/n	None	None	black	None	None	Pro 64	Dec 13
0579-54U	P6200	2.13	2GBx2	14.0" HD	0.3M	500G 5400	TP 11b/g/n	None	None	black	None	None	Prem 64	Dec 13
0579-53U	i3-380M	2.53	2GB	14.0" HD	0.3M	320G 7200	TP 11b/g/n	None	None	black	None	None	Pro 64	Dec 13

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Pentium® processor P6200 with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), 3MB cache or Intel® Core™ i3 processor i3-370M or i3-380M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-540M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost (3.06GHz), Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch
Memory	8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 0.3 or 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536 @ 75Hz; 1920x1080 (HDMI port)	
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch	Supports ThinkVantage® technologies
ThinkLight™	None	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.54" x 9.17" x 1.25-1.46"; 344 x 233mm x 31.8-37.0mm <i>4-cell:</i> from 4.72 lb (2.14kg); <i>6-cell:</i> from 4.9 lb (2.22kg); <i>9-cell:</i> from 5.29 lb (2.40kg) Matte black or black (top), trimmed with a thin silver band (side); black bottom Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell <i>4-cell:</i> up to 2.9 hr; <i>6-cell:</i> up to 4.5 hr	
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	ThinkPlus™, 22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969
PCIe Mini Card 11b/g/n WWAN upg	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 None	ThinkPlus 3-year LOR 9x5 NBD 45K5970
Modem Bluetooth™	None None	ThinkPlus 4-year LOR 9x5 NBD 45K5973
Ethernet Intel AMT	Realtek® RTL8111DL Gigabit Network Connection None	ThinkPlus 2-year P&L P/U Depot 45K5971
Audio support	High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack	ThinkPlus 3-year P&L P/U Depot 45K5972
Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole None	ThinkPlus 4-year P&L P/U Depot 45K5974
Fingerprint reader	None	Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US model(s) announced December 13, 2011; previous model(s) on May 10, 2011

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Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB 2.0 Port Replicator with Digital Video	0A33942	ann	03/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
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
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336		
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
Lenovo Optical Mouse A6010 (black)	57Y6255		
Lenovo Mini Optical Mouse M20B	55Y2091		
Lenovo Wireless Mouse N30B (black)	55Y9360		

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Headphone P550	55Y2065		

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann	10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann	10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann	10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputingThinkPad 65W AC Adapter⁴⁵ 40Y7696 ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters*Charging tips for 90W Ultrastim AC/DC Combo Adapter 41R4493*

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

More information at www.lenovopowertips.com**Carrying Cases**

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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

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

ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad Edge E420



Lenovo ThinkPad Edge E420



Lenovo ThinkPad Edge E420



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Lenovo ThinkPad Edge E420



Lenovo ThinkPad Edge E420

ThinkPad® Edge E420 1141 (Intel) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload
1141-55U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black			6	Pro 64
1141-56U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black			6	Prem 64
1141-57U	i3-2310M	4GBx1	14.0" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1141-58U	i3-2310M	4GBx1	14.0" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Prem 64
1141-9BU	i5-2520M	2GBx2	14.0" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1141-D9U	i3-2350M	4GBx1	14.0" HD	720p	500G 7200	Intel 1000	None	None	Matte black			6	Prem 64
1141-BUU	i3-2350M	4GBx1	14.0" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1141-BTU	i3-2350M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black			6	Pro 64

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

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.52" x 9.20" x 1.13-1.43"; 343.4 x 233.6mm x 28.7-36.4mm		
Weight ²	6-cell: from 4.85 lb (2.2kg); 9-cell: from 5.2 lb (2.36kg)		
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell		
Battery - life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.7 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard	One ExpressCard/34		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
WWAN	None		
Modem	None		
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless		
Ethernet	Realtek® RTL8111E Gigabit Network Connection		
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	None		
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

			Supports ThinkVantage® technologies
			65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
			For compatible accessories, please go to O-E420 sheet;
			For ThinkPlus™.22 service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information

US models announced October 4, 2011; previous models on April 19 or June 21, 2011

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(LW1-1) October 2011

ThinkPad® Edge E425 1198 (AMD) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	Top color	Finger print reader	Blue-tooth	Battery cells	Preload
1198-3FU	E2-3000M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	Matte black	None	None	6	Pro 64
1198-3EU	A4-3300M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	Matte black	None	None	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> AMD Accelerated Processor E2-3000M (dual-core, 1.80GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6380G Graphics, AMD Turbo Core technology (up to 2.40GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A4-3300M (dual-core, 1.90GHz, 2MB L2 cache), integrated AMD Radeon HD 6480G Graphics, AMD Turbo Core technology (up to 2.50GHz), integrated DDR3 memory controller (up to 1333MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Fingerprint Software (fingerprint models)• Password Manager (fingerprint models)• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Adobe Acrobat® X Standard (bundled with Microsoft Office)• Corel® WinDVD® (DVD±RW)• Corel Burn.Now™ Lenovo Edition (DVD±RW)• Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator		
Graphics	Dynamic switching between discrete and integrated graphics (user selectable), AMD Radeon HD Graphics in processor, and AMD Radeon™ HD 6470M Graphics , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 1920x1600 (VGA)@60Hz; 1920x1080p (HDMI)@60Hz</i>		
Keyboard	6-row, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.52" x 9.20" x 1.13-1.43"; 343.4 x 233.6mm x 28.7-36.4mm		
Weight ²	6-cell: from 4.85 lb (2.2kg); 9-cell: from 5.2 lb (2.36kg)		
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell		
Battery - life ¹⁰	6-cell: up to 4.2 hr; 9-cell: up to 8.3 hr		
Chipset	AMD A60M FCH		
ExpressCard	One ExpressCard/34		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card	One PCI Express Half Mini Card slot		
WLAN ⁴	ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1		
Modem	None		
Bluetooth™	None		
Ethernet	Realtek® RTL8111E Gigabit Network Connection		
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	None		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
90-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
For compatible accessories, please go to O-E420 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-EDGE sheet

See footnotes for more detailed information
 US model(s) announced September 6, 2011

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ThinkPad® Edge E420, E425 Accessories

Personal Systems Reference (PSREF)

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB 2.0 Port Replicator with Digital Video	0A33942	ann 03/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
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
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336	
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

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	41U5008	ann 01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
Lenovo Optical Mouse A6010 (black)	57Y6255	
Lenovo Wireless Mouse N30B (black)	55Y9360	

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann 10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann 10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann 10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05

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

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08

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

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad Edge E420s



Lenovo ThinkPad Edge E420s



ThinkVision® LT1421 with ThinkPad Edge E420s



Lenovo ThinkPad Edge E420s



Lenovo ThinkPad Edge E420s

ThinkPad® Edge E420s 4401 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Finger print reader	Blue-tooth	Bat-tery cells	Preload
4401-27U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Prem 64
4401-28U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Pro 64
4401-29U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	None	None	Finger		4	Pro 64
4401-5EU	i5-2430M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Prem 64
4401-5FU	i5-2430M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Pro 64
4401-5GU	i3-2330M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	None	None	Finger		4	Pro 64
4401-93U	i5-2430M	4GBx1	14.0" HD	720p	500G 5400	Intel 1000	None	None	Finger	Blue	4	Pro 64

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

Positioning Processor	<i>Elegant design with quality, reliability, and portability for SMB customers; two spindles</i> Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology	Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, slot-in Some: Solid State Drive (SSD) / SATA 3.0Gb/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	
mSATA	None	
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare display with glossy infinity glass, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz	
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, buttonless touchpad below keyboard, Tap Zones, scrolling regions, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.74" x 9.29" x 0.91-1.23"; 349mm x 236mm x 23.1-31.2mm starting at 4.14 lb (1.88kg) Moss Black soft touch finish, authentic metal accents Magnesium/Aluminum + PPS Integrated Lithium Ion 4-cell, 1000 cycle battery up to 7.0 hr	
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM65 Express Chipset None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support Security Security chip Fingerprint reader	Two PCI Express Mini Card slots Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 None None Some: Bluetooth 3.0 wireless Realtek® RTL8111E Gigabit Network Connection None High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole UPEK Fingerprint reader on palm rest, swipe sensor	Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-E420-S sheet; For ThinkPlus™, ²² service upgrade options, please go to S-EDGE sheet
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

US model(s) announced December 20; previous model(s) on March 22 or October 4, 2011

US model(s) withdrawn effective December 2011

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(PCD1-1) December 2011

ThinkPad® Edge E420s Accessories

Personal Systems Reference (PSREF)

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB 2.0 Port Replicator with Digital Video	0A33942	ann 03/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
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
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann 01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
Lenovo Optical Mouse A6010 (black)	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B (black)	55Y9360	

Security

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Power adapters

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

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

ThinkPad 14W Case Sleeve	57Y4294	ann 03/16/10
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

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

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad Edge 15"



Lenovo ThinkPad Edge 15"
(Glossy black model)



Lenovo ThinkPad Edge 15"



Lenovo ThinkPad Edge 15"
(Glossy red model)



Lenovo ThinkPad Edge 15"

ThinkPad® Edge 15" 0319 (Intel) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
0319-26U	i3-370M	2.40	4GB	15.6" HD	2.0M	500G 5400	TP 11b/g/n	None	None	Matte black	None	None	6	Pro 64	May 11
0319-25U	i3-370M	2.40	2GB	15.6" HD	2.0M	250G 5400	TP 11b/g/n	None	None	Matte black	None	None	6	Pro 64	May 11
0319-24U	i3-370M	2.40	2GB	15.6" HD	Glos 2.0M	250G 5400	TP 11b/g/n	None	None	Matte black	None	None	6	Prem 64	May 11
0319-23U	P6100	2.00	4GB	15.6" HD	Glos 2.0M	500G 5400	TP 11b/g/n	None	None	Matte black	None	None	6	Prem 64	May 11
0319-22U	P6100	2.00	2GB	15.6" HD	Glos 2.0M	250G 5400	TP 11b/g/n	None	None	Matte black	None	None	6	Prem 64	May 11
0319-3NU	P6200	2.13	2GB	15.6" HD	2.0M	250G 5400	TP 11b/g/n	None	None	Matte black	None	None	6	Prem 64	Aug 11
0319-42U	i5-540M	2.53	2GBx2	15.6" HD	0.3M	500G 5400	TP 11b/g/n	None	None	black	None	None	6	Pro 64	Dec 13
0319-3SU	i3-380M	2.53	2GBx2	15.6" HD	0.3M	500G 5400	TP 11b/g/n	None	None	black	None	None	6	Pro 64	Dec 13
0319-3RU	i3-380M	2.53	2GB	15.6" HD	0.3M	320G 7200	TP 11b/g/n	None	None	black	None	None	6	Pro 64	Dec 13
0319-3QU	i3-380M	2.53	2GB	15.6" HD	0.3M	320G 7200	TP 11b/g/n	None	None	black	None	None	6	Prem 64	Dec 13
0319-3PU	P6200	2.13	2GBx2	15.6" HD	0.3M	500G 5400	TP 11b/g/n	None	None	black	None	None	6	Prem 64	Dec 13

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Pentium® processor P6100 or P6200 with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), 3MB cache or Intel Core™ i3 processor i3-370M or i3-380M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost (3.06GHz), Hyper-Threading technology; 3MB cache	Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Access Connections™• Password Manager• ThinkVantage Power Manager• ThinkVantage System Update• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Microsoft Research AutoCollage Touch
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB⁸ (5400 rpm), 320GB (7200 rpm) or 500GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 0.3 or 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536@75Hz; 1920x1080 (HDMI port)	
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch	Supports ThinkVantage® technologies
ThinkLight™	None	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	<i>15.6W"</i> (WxDxH): 14.96" x 9.72" x 1.27-1.48"; 380 x 247mm x 32.3-37.5mm <i>4-cell:</i> from 5.32 lb (2.42kg); <i>6-cell:</i> from 5.50 lb (2.50kg); <i>9-cell:</i> from 5.89 lb (2.67kg) Matte black or black (top), trimmed with a thin silver band (side); black bottom Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell <i>4-cell:</i> up to 2.9 hr; <i>6-cell:</i> up to 4.5 hr	
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	ThinkPlus™. ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969
PCIe Mini Card 11b/g/n WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 None None None Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974
Security Security chip Fingerprint reader	None None None	Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US model(s) announced December 13, 2011; previous model(s) on May 10 or August 30, 2011

US model(s) withdrawn effective October 2011

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(LDN1-8) December 2011

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann	06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB 2.0 Port Replicator with Digital Video	0A33942	ann	03/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
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
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336		
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

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	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
Lenovo Optical Mouse A6010 (black)	57Y6255		
Lenovo Mini Optical Mouse M20B	55Y2091		
Lenovo Wireless Mouse N30B (black)	55Y9360		

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Headphone P550	55Y2065		

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann	10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann	10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann	10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputingThinkPad 65W AC Adapter⁴⁵ 40Y7696 ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters*Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493*

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

More information at www.lenovopowertips.com**Carrying Cases**

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
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

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

ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkPad®



Lenovo® ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload
1143-3BU	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black			6	Pro 64
1143-3CU	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black			6	Prem 64
1143-3DU	i3-2310M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Prem 64
1143-3EU	i3-2310M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1143-3FU	i5-2410M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1143-3GU	i5-2410M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Prem 64
1143-7RU	i5-2520M	2GBx2	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1143-BNU	i3-2350M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black			6	Prem 64
1143-AFU	i5-2430M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1143-AEU	i3-2350M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1143-ADU	i3-2350M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black			6	Pro 64
1143-D8U	i3-2350M	4GBx1	15.6" HD	720p	750G 5400	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1143-D7U	i5-2430M	4GBx1	15.6" HD	720p	750G 5400	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64

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

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)	
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
Optical	DVD burner, 12.7mm high, fixed, not removable, tray-in			
SATA disk	Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™			
mSATA™ SSD	None			
Widescreen display	15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator			
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI)@60Hz</i>			
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad			
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³			
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch			
ThinkLight™	None			
Dimensions ³	15.6W" (WxDxH): 14.96" x 9.78" x 1.15-1.33"; 380 x 248.5mm x 29.3-33.7mm			
Weight ²	6-cell: from 5.51 lb (2.5kg); 9-cell: from 5.86 lb (2.66kg)			
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell			
Battery - life ¹⁰	6-cell: up to 6.2 hr; 9-cell: up to 11.7 hr			
Chipset	Mobile Intel HM65 Express Chipset			
ExpressCard	One ExpressCard/34			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
PCIe Mini Card	Two PCI Express Mini Card slots			
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2			
WWAN	None			
Modem	None			
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless			
Ethernet	Realtek® RTL8111E Gigabit Network Connection			
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	None			
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			
			Supports ThinkVantage® technologies	
			65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378	
			For compatible accessories, please go to O-E520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-EDGE sheet	

See footnotes for more detailed information

US models announced October 4, 2011; previous models on April 19 or Jun 21, 2011

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(GGR1-1) October 2011

ThinkPad® Edge E525 1200 (AMD) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload
1200-38U	E2-3000M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	Matte black			6	Pro 64
1200-39U	E2-3000M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	Matte black			6	Prem 64
1200-2MU	A4-3300M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n	Matte black	Finger	Blue	6	Pro 64
1200-2LU	A4-3300M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	Matte black			6	Pro 64

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

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> AMD Accelerated Processor E2-3000M (dual-core, 1.80GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6380G Graphics, AMD Turbo Core technology (up to 2.40GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A4-3300M (dual-core, 1.90GHz, 2MB L2 cache), integrated AMD Radeon HD 6480G Graphics, AMD Turbo Core technology (up to 2.50GHz), integrated DDR3 memory controller (up to 1333MHz)	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Ready to install applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (only some listed) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™	
Widescreen display Camera	15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator	
Graphics	AMD Radeon HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 1920x1600 (VGA)@60Hz; 1920x1080p (HDMI)@60Hz</i>	
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device, Internet Scroll Bar ¹³	Supports ThinkVantage® technologies 65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 For compatible accessories, please go to O-E520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-EDGE sheet
Touchpad ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch None	
Dimensions ³ Weight ²	15.6W" (WxDxH): 14.96" x 9.78" x 1.2-1.51"; 380mm x 248.5mm x 30.6-38.3mm <i>6-cell:</i> from 5.69 lb (2.58kg); <i>9-cell:</i> from 6.04 lb (2.74kg)	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell	
Battery - life ¹⁰	<i>6-cell:</i> up to 3.75 hr; <i>9-cell:</i> up to 7.4 hr	
Chipset	AMD A60M FCH	
ExpressCard	One ExpressCard/34	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCIe Mini Card	One PCI Express Half Mini Card slot	
WLAN ⁴	11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1	
Modem	None	
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless	
Ethernet	Realtek® RTL8111E Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

US models announced September 6, 2011; previous models on August 30, 2011

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(GGR11-1) September 2011

ThinkPad® Edge E520, E525 Accessories

Personal Systems Reference (PSREF)

Memory

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB 2.0 Port Replicator with Digital Video	0A33942	ann 03/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
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
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336	
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

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	41U5008	ann 01/22/08
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
Lenovo Optical Mouse A6010 (black)	57Y6255	
Lenovo Wireless Mouse N30B (black)	55Y9360	

Security

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann 10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann 10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann 10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05

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

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

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

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

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08

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

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:

<http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml>

TopSeller service upgrade options for ThinkPad Edge & SL Series

ThinkPad Edge E220s/E420s Sealed Battery notebooks with 1-year Depot warranty

3 YEAR Depot Warranty with Battery Replacement	04W8702
3 YEAR Depot Warranty with Battery Replacement & ThinkPad Protection	04W8704
3 YEAR Onsite Warranty with Battery Replacement	04W8703
3 YEAR Onsite Warranty with Battery Replacement & ThinkPad Protection	04W8705

ThinkPad Edge & SL notebooks with 1-year Depot warranty

3 YEAR Depot Warranty	04W8706
3 YEAR Depot Warranty & ThinkPad Protection	04W8708
3 YEAR Onsite Warranty	04W8707
3 YEAR Onsite Warranty & ThinkPad Protection	04W8709

TopSeller Priority Support

- 24x7 support with priority routing and advanced level technicians

ThinkPad Edge & SL notebooks with 1-year Depot warranty

Add to 3-year warranty coverage - 3-year Priority Support*	04W8720
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* Covered machine must have concurrent warranty coverage.

Partial list of Lenovo® ThinkPlus Services²² for ThinkPad Edge notebooks

For more information see: http://www.lenovo.com/services_warranty/us/en/index.html

ThinkPlus service upgrade options for ThinkPad Edge series

ThinkPad Edge notebook with 1-year Depot warranty

2 YEAR Depot Warranty	45K5971
3 YEAR Depot Warranty	45K5972
4 YEAR Depot Warranty	0A34460
1 YEAR Onsite Warranty	45K5968
2 YEAR Onsite Warranty	45K5969
3 YEAR Onsite Warranty	45K5970
4 YEAR Onsite Warranty	0A34462

ThinkPlus service upgrade options for ThinkPad SL series

ThinkPad SL notebook with 1-year Depot warranty

2 YEAR Depot Warranty	45K5971
3 YEAR Depot Warranty	45K5972
4 YEAR Depot Warranty	45K5974
1 YEAR Onsite Warranty	45K5968
2 YEAR Onsite Warranty	45K5969
3 YEAR Onsite Warranty	45K5970
4 YEAR Onsite Warranty	45K5973

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.

² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.

³ **Thinness** may vary at certain points on the system.

⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.

⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.

⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.

⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.

¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2007 during testing. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

¹³ **Internet access not included.**

¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

¹⁶ **Activating Verizon Wireless Service:** Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service, airtime, and early termination charges may apply. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.

¹⁷ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

¹⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For ThinkPad notebooks with EasyServ or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.

¹⁹ **EasyServ depot repair service:** In the United States call 1-800-426-7378. The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.

²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

²² **ThinkPlus 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 ThinkPlus terms and conditions for complete details and restrictions.

²³ **Activating AT&T Wireless Service:** Requires separate agreement with AT&T, subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

²⁴ **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. 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.

²⁷ **Based on IEEE 802.11a and 802.11b.** A customer can not upgrade to a different wireless Mini PCI adapter due to FCC regulations. Security screws prevent removal of this adapter. This wireless LAN product has been designed to permit legal operation world-wide in regions which it is approved. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

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

³² **Wireless:** Based on IEEE 802.11a, 802.11b, and 802.11g respectively. An adapter with 11a/b, 11b/g, or 11a/b/g can communicate on either/any of these listed formats respectively, the actual connection will be based on the access point to which it connects.

³⁵ **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/think/support and enter your machine type and model number for more information.

³⁷ **Battery:** The ThinkPad Edge and ThinkPad SL series do not support batteries that are not genuine Lenovo-made or authorized. These systems will continue to boot, but may not charge unauthorized batteries.

Warning: Lenovo has no responsibility for the performance or safety of unauthorized batteries, and provides no warranties for failures or damage arising out of their use.

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December 2011
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Personal Systems Reference Lenovo® ThinkCentre Desktops

December 2011 - Version 411

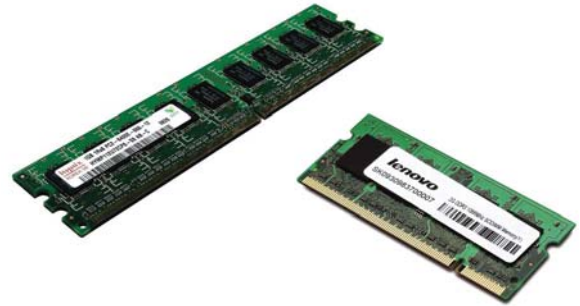


Lenovo ThinkCentre M91p
(Small and Tower Form Factors)

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Kensington® MicroSaver® Cable Lock
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2GB PC3-10600 DDR3 Low-Halogen UDIMM 57Y4390
4GB PC3-10600 DDR3 UDIMM 0A36527
2GB PC3-10600 DDR3 Low-Halogen SODIMM 55Y3710
4GB PC3-10600 DDR3 Low-Halogen SODIMM 55Y3711
(UDIMM for SFF, Tower only;
SODIMM for Eco USFF, All-In-One only)



NVIDIA® GeForce® 310 DMS59 (2-DVI, 2-VGA)
57Y4167



Lenovo® USB-to-DVI Monitor Adapter
45K5296



Ultraslim Plus Wireless Keyboard and Mouse
0A34032



Lenovo Laser Mouse (USB)
41U3074



Lenovo ThinkCentre M58 Eco Ultra Small



Lenovo ThinkCentre M58 Eco Ultra Small
with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre M58 Small



Lenovo ThinkCentre M58 Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M58 Tower



Lenovo ThinkCentre M58 Tower
with dual Lenovo ThinkVision monitors

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58	8820-AQU	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro	32	None Jan 10

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 3-year limited warranty¹**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket			Eco Ultra Small <div><div>optical</div><div>disk</div><div></div></div>	
Implementation	Processor in LGA775 socket			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	
Memory	2GB std , 8GB max®, PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available			Slot 1: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 80mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal• Toolless systemboard retention• System floor stand for vertical orientation	
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display				
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar				
eSATA port	None				
Diskette drive	None				
Media reader	None				
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0				
Intel AMT	None				
Modem	None				
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo				
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU				
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32				Accessories <ul style="list-style-type: none">500GB SATA 3.0Gb/s Disk (7200 rpm) 43R19901TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918DisplayPort to Single-link DVI-D Cable 45J7915DisplayPort to VGA Monitor Cable 57Y4393Lenovo Vertical PC and Monitor Stand II 41R4474More accessories on O-M58 sheet	
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)				Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	
				Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)<ul style="list-style-type: none">- security slot and cover release button are combined into one latch for improved chassis security• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Individual USB port disablement	
				Supports ThinkVantage® technologies	
				EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
				Limited Warranty¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ International Warranty Service®➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	

Name	Type-model	Slot x bay	Processor	GHz Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58	7359-F5U	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Pro 32	None Jan 10

- **This model has a 3-year limited warranty¹**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> Intel® Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket			Eco Ultra Small <div><div>optical</div><div>disk</div></div>	
Implementation	Processor in LGA775 socket			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	
Memory	2GB std , 8GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-Italics</i> : standard memory in one socket; one socket available			Slot 1: Low Profile, 32-bit PCI 2.3	
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display			<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 80mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal• Toolless systemboard retention• System floor stand for vertical orientation	
DP dongle	DisplayPort to Single-link DVI-D Cable				
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar				
eSATA port	None				
Diskette drive	None				
Media reader	None				
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0				
Intel AMT	None				
Modem	None				
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo				
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU				
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32					
Preloaded applications ⁵ <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)					
Accessories <ul style="list-style-type: none">500GB SATA 3.0Gb/s Disk (7200 rpm) 43R19901TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918Lenovo Vertical PC and Monitor Stand II 41R4474DisplayPort to Single-link DVI-D Cable 45J7915DisplayPort to VGA Monitor Cable 57Y4393More accessories on O-M58 sheetAcc Guide in pdf lenovo.com/accessoriesguideOther accessories at lenovo.com/accessories					
				EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
				Limited Warranty ¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win 7 preload	Global (G) GMP (P)	Avail date
M58	7637-A2U	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	No	Pro 32	G P	Nov 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket			Eco Ultra Small <div><div>optical</div><div>disk</div><div></div></div>	
Implementation					
Memory	2GB std , 8GB max ⁶ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display			Slot 1: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 80mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal• Toolless systemboard retention• System floor stand for vertical orientation	
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)<ul style="list-style-type: none">- security slot and cover release button are combined into one latch for improved chassis security• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Individual USB port disablement	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar				
eSATA port	None				
Diskette drive	None				
Media reader	None				
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0				
Intel AMT	None				
Modem	None				
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo				
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU				
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32				Accessories <ul style="list-style-type: none">500GB SATA 3.0Gb/s Disk (7200 rpm) 43R19901TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918DisplayPort to Single-link DVI-D Cable 45J7915DisplayPort to VGA Monitor Cable 57Y4393Lenovo Vertical PC and Monitor Stand II 41R4474More accessories on O-M58 sheet	
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)				Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	
				Supports ThinkVantage® technologies	
				EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
				Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
M58	8910-AQU	2x3	Pentium E5400	2.70	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
M58	8910-B4U	2x3	Pentium E5700	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Oct 10
M58	8910-ARU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
M58	8910-AUU	2x3	Core 2 Quad Q9500	2.83	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Mar 10
M58	8910-ASU	2x3	Core 2 Duo E7500	2.93	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 64	None	Mar 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® Processor E5400 or E5700 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q9500 with quad-core , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		Small	<div><div>optical</div><div>disk</div><div>(in rear)</div></div>																
Implementation			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)																	
Memory	2GB or 4GB std, 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none">• Business black color; metal case• 12.5" W X 14.0" D X 3.9" H• 317mm W X 355mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk, optical drive removal• Toolless adapter retention• Toolless systemboard retention• System floor stand for vertical orientation																	
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display																			
SATA disk	250GB or 320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)<ul style="list-style-type: none">- optional cable also locks the cover by deactivating the cover release buttons• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement																	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support																			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																			
eSATA port	One external SATA (eSATA) port																			
Diskette drive	None																			
Media reader	None																			
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA																			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																			
Speaker	One internal speaker for business audio																			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																			
Intel AMT	None																			
Modem	None																			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies																	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		GREENGUARD® certified RoHS-compliant																	
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs		Limited Warranty¹ <ul style="list-style-type: none">⇨ 3-year parts and labor⇨ International Warranty Service⁹⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇨ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇨ ThinkPlus services at lenovo.com/thinkplus/warranty⇨ Post warranty maintenance services available⇨ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																	
Preloaded operating system²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Professional 32- <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)		Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td colspan="2">More accessories on O-M58 sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>			2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	More accessories on O-M58 sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories	
2GB PC3-8500 DDR3 UDIMM	45J5435																			
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																			
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																			
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Acc Guide in pdf lenovo.com/accessoriesguide																				
Other accessories at lenovo.com/accessories																				

See footnotes for important warranty information

¹⁸ US model announced September 28, 2010; previous models on January 12 or February 23, 2010

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Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
M58	7360-EUU	2x3	Pentium E5700	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP		None	Pro 32	None	Oct 10
M58	7360-EVU	2x3	Pentium E6700	3.20	2	2GB	250GB	DVD±RW	GMA	VGA, DP		None	Pro 32	None	Dec 10
M58	7360-EHU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	Pro 32	None	Jan 10

- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® Processor E5700 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Pentium Processor E6700 with dual-core , 1066MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache		Small <div><div>optical</div><div>disk (in rear)</div></div>																
Implementation	Processor in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)																
Memory	2GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3																
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none">• Business black color; metal case• 12.5" W X 14.0" D X 3.9" H• 317mm W X 355mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk, optical drive removal• Toolless adapter retention• Toolless systemboard retention• System floor stand for vertical orientation																
DP dongle																			
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors																		
eSATA port	One external SATA (eSATA) port																		
Diskette drive	None																		
Media reader	None																		
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)<ul style="list-style-type: none">- optional cable also locks the cover by deactivating the cover release buttons• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement																
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA																		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																		
Speaker	One internal speaker for business audio																		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																		
Intel AMT	None																		
Modem	None																		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																		
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs																		
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32		Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td colspan="2">More accessories on O-M58 sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>		2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	More accessories on O-M58 sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories	
2GB PC3-8500 DDR3 UDIMM	45J5435																		
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																		
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More accessories on O-M58 sheet																			
Acc Guide in pdf lenovo.com/accessoriesguide																			
Other accessories at lenovo.com/accessories																			
Preloaded applications ⁵ <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)																			

Limited Warranty ¹ <ul style="list-style-type: none">⇨ 3-year parts and labor⇨ International Warranty Service⁹⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇨ Onsite service upgrade options (in eligible locations)⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇨ ThinkPlus services at lenovo.com/thinkplus/warranty⇨ Post warranty maintenance services available⇨ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	
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See footnotes for important warranty information

© US model announced November 30, 2010; previous models on December 15, 2009 or September 14, 2010

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 (MLAN4-18) December 2010

ThinkCentre® M58 Small (6258) - ES 5.0 (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win 7 preload	Global Educ	Avail date
M58	6258-D9U	2x3	Pentium E5700	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Oct 10
M58	6258-DAU	2x3	Pentium E6700	3.20	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Dec 10
M58	6258-D7U	2x3	Core 2 Duo E7600	3.06	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Jun 10
M58	6258-DBU	2x3	Core 2 Duo E7600	3.06	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Oct 10

- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® Processor E5700 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Pentium Processor E6700 with dual-core, 1066MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7600 with dual-core, Virtualization Technology, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket		Small <div><div>optical</div><div>disk</div><div>(in rear)</div></div>	
Implementation			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
Memory	1GB or 2GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		<ul style="list-style-type: none">• Business black color; metal case• 12.5" W X 14.0" D X 3.9" H• 317mm W X 355mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk, optical drive removal• Toolless adapter retention• Toolless systemboard retention• System floor stand for vertical orientation	
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 512MB [<i>1GB models</i>] or 765MB [<i>2GB models</i>]), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display			
SATA disk	160GB or 250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	None			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 32		Accessories 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 More accessories on O-M58 sheet		
Preloaded applications ⁵ (only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW)		Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories		
Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)<ul style="list-style-type: none">- optional cable also locks the cover by deactivating the cover release buttons• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement				
Supports ThinkVantage® technologies				
Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
Limited Warranty ¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations)⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹				

See footnotes for important warranty information

® US model announced November 30, 2010; previous models on June 1 or September 14, 2010

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(MLAN4-29) December 2010

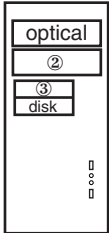
Personal Systems Reference (PSREF)

- *These small and medium business (SMB) models are part of the US TopSeller™ Program*
- *These models have a 3-year limited warranty¹*
- *These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

See footnotes for important warranty information © Lenovo
US models announced February 23, 2010; previous model on January 12, 2010 (MLAN4-25) March 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
ES*	M58	7373-FCU	4x4 Pentium E6700	3.20	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP		None	Pro 32	None	Dec 10
	M58	7373-EGU	4x4 Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	Pro 32	None	Jan 10

- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

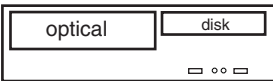
Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® Processor E6700 with dual-core , 1066MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket		Tower <ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.3" D X 15.8" H• 175mm W X 440mm D X 402mm H• 24.2 lb (11.0 kg) in max configuration• Handle on top front• Toolless cover removal• Toolless disk, diskette drive, optical drive removal• Toolless adapter retention 																				
Implementation																							
Memory	2GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available																						
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable																						
DP dongle			Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																				
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® MicroSaver® cable)• Admin on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement																				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																						
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																						
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar																						
eSATA port	None																						
Diskette drive	None																						
Media reader	None																						
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																						
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																						
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																						
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																						
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																						
Speaker	One internal speaker for business audio																						
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																						
Intel AMT	None																						
Modem	None																						
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																						
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																						
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																						
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs																						
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32																							
Preloaded applications ⁵ <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)																							
Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td><td>45K1675</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>NVIDIA® Quadro® 256MB NVS 295</td><td>45K1669</td></tr><tr><td colspan="2">More accessories on O-M58 sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>			2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® Quadro® 256MB NVS 295	45K1669	More accessories on O-M58 sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories		
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			Limited Warranty ¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ International Warranty Service®➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																				

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁶	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58	9728-A5U	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	No	Pro 32	Gbl	Oct 09
<ul style="list-style-type: none">• This model has a 3-year limited warranty¹• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning	Mainstream enterprise stability and manageability										<div><div>Tower</div><ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.3" D X 15.8" H• 175mm W X 440mm D X 402mm H• 24.2 lb (11.0 kg) in max configuration• Handle on top front• Toolless cover removal• Toolless disk, diskette drive, optical drive removal• Toolless adapter retention<div>Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk</div><div>Slot 1: half-length,full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length,full-height, PCIe x1 Slot 3: half-length,full-height, 32-bit PCI 2.3 Slot 4: half-length,full-height, 32-bit PCI 2.3</div></div> <div><div>optical</div><div>②</div><div>③</div><div>disk</div><div>④</div></div>					
Processor	Intel® Core™ 2 Duo Processor E7500 with dual-core, Virtualization Technology, 1066MHz system bus, and 3MB L2 cache															
Implementation	Processor in LGA775 socket															
Memory	2GB std, 16GB max ⁸ , PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; Non-italics: standard memory in one socket; 3 sockets available															
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display															
SATA disk	250GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1															
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar															
eSATA port	None															
Diskette drive	None															
Media reader	None															
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec															
Speaker	One internal speaker for business audio															
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0															
Intel AMT	None															
Modem	None															
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo															
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo															
Power supply	280 watts with variable speed fan, autosensing, 85% PSU															
Preloaded operating system ²⁰			Accessories													
- Genuine Windows® 7 Professional 32			2GB PC3-8500 DDR3 UDIMM			45J5435										
			500GB SATA 3.0Gb/s Disk (7200 rpm)			43R1990										
Preloaded applications ⁵ (only some listed)			1TB SATA 3.0Gb/s Disk (7200 rpm)			45J7918										
• Rescue and Recovery™			Blu-ray™ Burner SATA 1.5Gb/s Drive			45K1675										
• ThinkVantage System Update			DisplayPort to Single-link DVI-D Cable			45J7915										
• ThinkVantage Power Manager			DisplayPort to VGA Monitor Cable			57Y4393										
• ThinkVantage Toolbox			NVIDIA® Quadro® 256MB NVS 295			45K1669										
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• Roxio MyDVD® (DVD±RW)																
<div>Security</div> <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement																
Supports ThinkVantage® technologies																
Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant																
<div>Limited Warranty¹</div> <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁶	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win 7 preload	Global (G) GMP (P)	Avail date
M58	7639-A1U	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	None	Pro 32	G P	Nov 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache		Tower <ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.3" D X 15.8" H• 175mm W X 440mm D X 402mm H• 24.2 lb (11.0 kg) in max configuration• Handle on top front• Toolless cover removal• Toolless disk, diskette drive, optical drive removal• Toolless adapter retention <div><div>optical</div><div>②</div><div>③</div><div>disk</div><div>④</div></div>																				
Implementation	Processor in LGA775 socket																						
Memory	2GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available																						
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display																						
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																						
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																						
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar																						
eSATA port	None																						
Diskette drive	None																						
Media reader	None																						
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																						
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																						
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																						
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																						
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																						
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Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																						
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Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																						
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs																						
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32			Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement																				
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)																							
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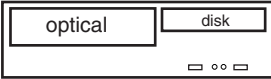
Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58p	9961-ALU	1x2	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	vPro	Pro 32	No	Jan 10
<ul style="list-style-type: none">• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)• This small and medium business (SMB) model is part of the US TopSeller™ Program• This model has a 3-year limited warranty¹• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket										Eco Ultra Small					
Implementation																
Memory	2GB std , 8GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3					
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 80mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal• Toolless systemboard retention• System floor stand for vertical orientation					
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1															
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar															
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Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)															
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Intel AMT	Intel Active Management Technology (iAMT)															
Modem	None															
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo															
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo															
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU															
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32							Accessories <ul style="list-style-type: none">500GB SATA 3.0Gb/s Disk (7200 rpm) 43R19901TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918DisplayPort to Single-link DVI-D Cable 45J7915DisplayPort to VGA Monitor Cable 57Y4393Lenovo Vertical PC and Monitor Stand II 41R4474More accessories on O-M58 sheet									
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)							Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories									
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ThinkCentre® M58p Eco Ultra Small (7479) - ES 5.0 (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58p	7479-B9U	1x2	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	Pro 32	None	Jan 10
M58p	7479-BEU	1x2	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP		ES50	vPro	Pro 32	None	Oct 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										Eco Ultra Small					
Implementation	Processor in LGA775 socket															
Memory	2GB std , 8GB max ^a , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3					
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable										<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 80mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal• Toolless systemboard retention• System floor stand for vertical orientation					
DP dongle																
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support															
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar															
eSATA port	None															
Diskette drive	None															
Media reader	None															
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec															
Speaker	One internal speaker for business audio															
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0															
Intel AMT	Intel Active Management Technology (iAMT)															
Modem	None															
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo															
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo															
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU															

Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32	Accessories <ul style="list-style-type: none">500GB SATA 3.0Gb/s Disk (7200 rpm) 43R19901TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918Lenovo Vertical PC and Monitor Stand II 41R4474DisplayPort to Single-link DVI-D Cable 45J7915DisplayPort to VGA Monitor Cable 57Y4393More accessories on O-M58 sheet	
Preloaded applications ⁵ <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)	Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	

Security

- Security chip (see information on left)
- Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
 - security slot and cover release button are combined into one latch for improved chassis security
- Power-on password
- Administrator password
- Hard disk password (user and master)
- Boot sequence control
- Boot without diskette, keyboard
- Individual USB port disablement

Limited Warranty¹

- ⇒ **3-year parts and labor**
- ⇒ **International Warranty Service⁹**
- ⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ⇒ **Onsite service upgrade options (in eligible locations):⁷**
 - **3-year LOR 9x5, 4 hour response** (ThinkPlus™ part number 41C9192)
 - **3-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9193)
 - **4-year LOR 9x5, Next Business Day** (ThinkPlus part number 41C9194)
 - **4-year LOR 9x5, 4 hour response** (ThinkPlus part number 41C9195)
 - **4-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9196)
- ⇒ **ThinkPlus services at lenovo.com/thinkplus/warranty**
- ⇒ **Post warranty maintenance services available**
- ⇒ **24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378**

Supports ThinkVantage® technologies

EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
GREENGUARD® certified
RoHS-compliant

See footnotes for important warranty information


US model announced September 14, 2010; previous model on December 15, 2009

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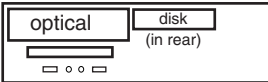
(MLAN4-20) October 2010

ThinkCentre® M58p Small (9964) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
 M58p	9964-ABU	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
M58p	9964-ACU	2x3	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
M58p	9964-ADU	2x3	Core 2 Duo E8400	3.00	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 64	None	Mar 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or Intel Core 2 Quad Processor Q9400 with quad-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket	Small  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none">• Business black color; metal case• 12.5" W X 14.0" D X 3.9" H• 317mm W X 355mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk, optical drive removal• Toolless adapter retention• Toolless systemboard retention• System floor stand for vertical orientation
Implementation	Processor in LGA775 socket	
Memory	2GB or 4GB std, 16GB max⁸, PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display	
SATA disk	Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement	
SATA controller		
SATA DVD±RW		
SATA cables	Supports ThinkVantage® technologies	
eSATA port		
Diskette drive		
Media reader	GREENGUARD® certified RoHS-compliant	
Chipset		
Front ports		
Rear ports	Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	
Internal connector		
Rear audio ports		
Audio	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Speaker		
Ethernet		
Intel AMT	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Modem		
Security chip		
Keyboard	280 watts with variable speed fan, autosensing, two diagnostic LEDs	
Mouse		
Power supply		

Preloaded operating system ²⁰			Accessories		
- <i>Some:</i> Genuine Windows® 7 Professional 32			2GB PC3-8500 DDR3 UDIMM		45J5435
- <i>Some:</i> Genuine Windows 7 Professional 64			500GB SATA 3.0Gb/s Disk (7200 rpm)		43R1990
			1TB SATA 3.0Gb/s Disk (7200 rpm)		45J7918
			DisplayPort to Single-link DVI-D Cable		45J7915
			DisplayPort to VGA Monitor Cable		57Y4393
Preloaded applications⁵ (only some listed)			More accessories on O-M58 sheet		
• Rescue and Recovery™			Acc Guide in pdf lenovo.com/accessoriesguide		
• ThinkVantage System Update			Other accessories at lenovo.com/accessories		
• ThinkVantage Power Manager					
• ThinkVantage Toolbox					
• Norton™ Internet Security 2011 (30 days of virus definitions)					
• Adobe® Reader®					
• Adobe Flash® Player					
• Microsoft Office 2010 preloaded; purchase product key to activate					
• Roxio® Creator® Business Edition (DVD±RW)					
• Roxio MyDVD® (DVD±RW)					




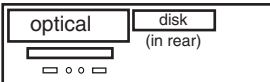
See footnotes for important warranty information

US model announced February 23, 2010; previous models on January 12, 2010

US model withdrawn effective April 2010

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(MLAN4-27) February 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date			
	M58p	7483-BWU	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	vPro	Pro 32	None	Oct 10			
	M58p	7483-BRU	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	Pro 32	None	Jan 10			
	M58p	7483-BVU	2x3	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP	vPro	Pro 64	None	Oct 10			
<ul style="list-style-type: none">• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																		
Positioning Processor											Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		Small 					
Implementation											Processor in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)					
Memory											2GB std, 16GB max⁸, PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3					
Graphics											Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none">• Business black color; metal case• 12.5" W X 14.0" D X 3.9" H• 317mm W X 355mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk, optical drive removal• Toolless adapter retention• Toolless systemboard retention• System floor stand for vertical orientation					
DP dongle											<i>Some:</i> DisplayPort to Single-link DVI-D Cable		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement					
SATA disk											250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts							
SATA controller											Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1							
SATA DVD±RW											Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive							
SATA cables											Two SATA cables (each 1-drop to device), two SATA connectors							
eSATA port											One external SATA (eSATA) port							
Diskette drive											None							
Media reader											None							
Chipset											Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O							
Front ports											Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)							
Rear ports											Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA							
Internal connector											Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)							
Rear audio ports											Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)							
Audio											High Definition (HD) Audio, Analog Devices AD1882 codec							
Speaker											One internal speaker for business audio							
Ethernet											Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0							
Intel AMT											Intel Active Management Technology (IAMT)							
Modem											None							
Security chip											Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant							
Keyboard											Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo							
Mouse											Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo							
Power supply											280 watts with variable speed fan, autosensing, two diagnostic LEDs							
Preloaded operating system²⁰											Accessories					Supports ThinkVantage® technologies		
- <i>Some:</i> Genuine Windows® 7 Professional 32											2GB PC3-8500 DDR3 UDIMM					45J5435		
- <i>Some:</i> Genuine Windows 7 Professional 64											500GB SATA 3.0Gb/s Disk (7200 rpm)					43R1990		
											1TB SATA 3.0Gb/s Disk (7200 rpm)					45J7918		
											DisplayPort to Single-link DVI-D Cable					45J7915		
											DisplayPort to VGA Monitor Cable					57Y4393		
											More accessories on O-M58 sheet							
Preloaded applications⁵ (all OSes; only some listed)											Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories					Limited Warranty¹ <ul style="list-style-type: none">☞ 3-year parts and labor☞ International Warranty Service⁹☞ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)☞ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)☞ ThinkPlus services at lenovo.com/thinkplus/warranty☞ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378		
• Rescue and Recovery™																		
• ThinkVantage System Update																		
• ThinkVantage Power Manager																		
• ThinkVantage Toolbox																		
• Norton™ Internet Security 2011 (30 days of virus definitions)																		
• Adobe® Reader®																		
• Adobe Flash® Player																		
• Microsoft Office 2010 preloaded; purchase product key to activate																		
• Roxio® Creator® Business Edition (DVD±RW)																		
• Roxio MyDVD® (DVD±RW)																		

See footnotes for important warranty information

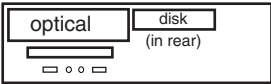
☞ US models announced September 14, 2010; previous model on December 15, 2009

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(MLAN4-21) October 2010

Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor conn	Chassis intr switch	DisplayPort dongle	Intel vPro	Floor stand	Win7 preload	Global Educ	Avail date
7220-B3U	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP		None	vPro	Stand	Pro 32		Oct 10
7220-AVU	2x3	Core 2 Duo E8400	3.00	2	2GB	320GB	DVD±RW	GMA	VGA, DP	Switch	None	vPro		Pro 32	Gbl	Oct 10
7220-B4U	2x3	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP		None	vPro	Stand	Pro 64		Oct 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

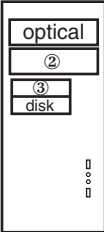
Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		Small 
Implementation	Processor in LGA775 socket		
Memory	2GB std , 16GB max ^a , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		<ul style="list-style-type: none">• Business black color; metal case• 12.5" W X 14.0" D X 3.9" H• 317mm W X 355mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk, optical drive removal• Toolless adapter retention• Toolless systemboard retention• <i>Some:</i> system floor stand for vertical orientation
SATA disk	250GB or 320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	One external SATA (eSATA) port		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement• <i>Some:</i> Chassis intrusion switch
Diskette drive	None		
Media reader	None		
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA		Supports ThinkVantage® technologies
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	Intel Active Management Technology (iAMT)		Limited Warranty¹ <ul style="list-style-type: none">↗ 3-year parts and labor↗ International Warranty Service⁹↗ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)↗ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)↗ ThinkPlus services at lenovo.com/thinkplus/warranty↗ Post warranty maintenance services available↗ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
Preloaded operating system²⁰		Accessories	
- <i>Some:</i> Genuine Windows® 7 Professional 32		2GB PC3-8500 DDR3 UDIMM	45J5435
- <i>Some:</i> Genuine Windows 7 Professional 64		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918
		DisplayPort to Single-link DVI-D Cable	45J7915
		DisplayPort to VGA Monitor Cable	57Y4393
		More accessories on O-M58 sheet	
Preloaded applications⁵ (all OSes; only some listed)		Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	
• Rescue and Recovery™			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			

ThinkCentre® M58p Tower (9965) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
M58p	9965-A9U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
M58p	9965-ABU	4x4	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
M58p	9965-ACU	4x4	Core 2 Duo E8400	3.00	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 64	None	Mar 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 with dual-core , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or Intel Core 2 Quad Processor Q9400 with quad-core , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket										Tower <ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.3" D X 15.8" H• 175mm W X 440mm D X 402mm H• 24.2 lb (11.0 kg) in max configuration• Handle on top front• Toolless cover removal• Toolless disk, diskette drive, optical drive removal• Toolless adapter retention									
Implementation																				
Memory	2GB or 4GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk									
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3									
SATA disk	250GB or 320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening										Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement									
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support																			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar																			
eSATA port	None										Supports ThinkVantage® technologies									
Diskette drive	None																			
Media reader	None										GREENGUARD® certified RoHS-compliant									
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378				
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																			
Speaker	One internal speaker for business audio																			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																			
Intel AMT	Intel Active Management Technology (iAMT)																			
Modem	None																			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																			
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs																			

Preloaded operating system²⁰	Accessories
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM 45J5435
- <i>Some:</i> Genuine Windows 7 Professional 64	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918
	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675
	DisplayPort to Single-link DVI-D Cable 45J7915
	DisplayPort to VGA Monitor Cable 57Y4393
	NVIDIA® Quadro® 256MB NVS 295 45K1669
	More accessories on O-M58 sheet
	Acc Guide in pdf lenovo.com/accessoriesguide
	Other accessories at lenovo.com/accessories

Preloaded applications⁵ (only some listed)

- Rescue and Recovery™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)

See footnotes for important warranty information

US model announced February 23, 2010; previous models on January 12, 2010

US model withdrawn effective April 2010

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(MLAN4-28) February 2010

ThinkCentre® M58p Tower (7484) - Windows 7

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁶	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
ES	M58p 7484-E1U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP		vPro	Pro 32	None	Oct 10
	M58p 7484-D1U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	Pro 32	None	Jan 10
ES	M58p 7484-D9U	4x4	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP		vPro	Pro 64	None	Oct 10

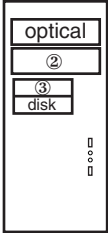
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

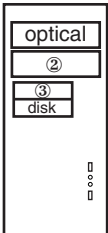
Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		Tower <ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.3" D X 15.8" H• 175mm W X 440mm D X 402mm H• 24.2 lb (11.0 kg) in max configuration• Handle on top front• Toolless cover removal• Toolless disk, diskette drive, optical drive removal• Toolless adapter retention <div><div>optical</div><div>②</div><div>③</div><div>disk</div><div>④</div></div>																			
Implementation	Processor in LGA775 socket																					
Memory	2GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available																					
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable																					
DP dongle			<div>Bay ① 5.25", 1.6" high, access, std optical</div> <div>Bay ② 5.25", 1.6" high, access, open</div> <div>Bay ③ 3.5", 1" high, access, open (reader/diskette)</div> <div>Bay ④ 3.5", 1" high, no access, std disk</div> <div>Slot 1: half-length,full-height, PCIe 2.0 x16 (75w max)</div> <div>Slot 2: half-length,full-height, PCIe x1</div> <div>Slot 3: half-length,full-height, 32-bit PCI 2.3</div> <div>Slot 4: half-length,full-height, 32-bit PCI 2.3</div>																			
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																					
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																					
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar																					
eSATA port	None																					
Diskette drive	None																					
Media reader	None																					
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																					
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																					
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																					
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																					
Speaker	One internal speaker for business audio																					
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																					
Intel AMT	Intel Active Management Technology (iAMT)																					
Modem	None																					
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																					
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																					
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs																					
<div><div>Preloaded operating system²⁰<ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Professional 32- <i>Some:</i> Genuine Windows 7 Professional 64Preloaded applications⁵ (all OSes; only some listed)<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)</div><div>Accessories<table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td><td>45K1675</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>NVIDIA® Quadro® 256MB NVS 295</td><td>45K1669</td></tr><tr><td colspan="2">More accessories on O-M58 sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table></div></div>			2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® Quadro® 256MB NVS 295	45K1669	More accessories on O-M58 sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories	
2GB PC3-8500 DDR3 UDIMM	45J5435																					
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																					
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Other accessories at lenovo.com/accessories																						
<div><div>Security<ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement</div><div>Supports ThinkVantage® technologies</div><div>GREENGUARD® certified RoHS-compliant</div><div>Limited Warranty¹<ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div>																						

See footnotes for important warranty information

ES US models announced September 14, 2010; previous model on December 15, 2009

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(MLAN4-22) October 2010

Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	Chassis intr switch	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3063-BVU	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP		None	ES50	vPro	Pro 32		Oct 10
3063-BSU	4x4	Core 2 Duo E8400	3.00	2	2GB	320GB	DVD±RW	GMA	VGA, DP	Switch	None	ES50	vPro	Pro 32	Gbl	Oct 10
<ul style="list-style-type: none">• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache									Tower <ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.3" D X 15.8" H• 175mm W X 440mm D X 402mm H• 24.2 lb (11.0 kg) in max configuration• Handle on top front• Toolless cover removal• Toolless disk, diskette drive, optical drive removal• Toolless adapter retention						
Implementation	Processor in LGA775 socket															
Memory	2GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available															
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display															
SATA disk	250GB or 320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts									Bay ① 5.25", 1.6" high, access, std optical						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1									Bay ② 5.25", 1.6" high, access, open						
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive									Bay ③ 3.5", 1" high, access, open (reader/diskette)						
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar									Bay ④ 3.5", 1" high, no access, std disk						
eSATA port	None									Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)						
Diskette drive	None									Slot 2: half-length, full-height, PCIe x1						
Media reader	None									Slot 3: half-length, full-height, 32-bit PCI 2.3						
Chipset	Intel Q45 Express Chipset (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O									Slot 4: half-length, full-height, 32-bit PCI 2.3						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)									Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password (user and master)• Boot sequence control• Boot without diskette, keyboard• Serial port I/O control• Individual USB port disablement• <i>Some</i>: Chassis intrusion switch						
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec									Supports ThinkVantage® technologies						
Speaker	One internal speaker for business audio															
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0															
Intel AMT	Intel Active Management Technology (iAMT)															
Modem	None									Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant						
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo															
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo															
Power supply	280 watts with variable speed fan, autosensing, 85% PSU															
Preloaded operating system²⁰			Accessories													
- Genuine Windows® 7 Professional 32			2GB PC3-8500 DDR3 UDIMM			45J5435										
Preloaded applications⁵ (only some listed)			500GB SATA 3.0Gb/s Disk (7200 rpm)			43R1990										
• Rescue and Recovery™			1TB SATA 3.0Gb/s Disk (7200 rpm)			45J7918										
• ThinkVantage System Update			Blu-ray™ Burner SATA 1.5Gb/s Drive			45K1675										
• ThinkVantage Power Manager			DisplayPort to Single-link DVI-D Cable			45J7915										
• ThinkVantage Toolbox			DisplayPort to VGA Monitor Cable			57Y4393										
• Norton™ Internet Security 2011 (30 days of virus definitions)			NVIDIA® Quadro® 256MB NVS 295			45K1669										
• Adobe® Reader®			More accessories on O-M58 sheet													
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• Microsoft Office 2010 preloaded; purchase product key to activate			Other accessories at lenovo.com/accessories													
• Roxio® Creator® Business Edition (DVD±RW)																
• Roxio MyDVD® (DVD±RW)																

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win 7 preload	Global (G) GMP (P)	Avail date
M58p	3285-A1U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	vPro	Pro 32	G P	Oct 09
<ul style="list-style-type: none">• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)• This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket									Tower <ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.3" D X 15.8" H• 175mm W X 440mm D X 402mm H• 24.2 lb (11.0 kg) in max configuration• Handle on top front• Toolless cover removal• Toolless disk, diskette drive, optical drive removal• Toolless adapter retention						
Implementation	Processor in LGA775 socket									Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk						
Memory	2GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available									Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display															
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1															
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar															
eSATA port	None															
Diskette drive	None															
Media reader	None															
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec															
Speaker	One internal speaker for business audio															
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0															
Intel AMT	Intel Active Management Technology (iAMT)															
Modem	None															
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo															
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo															
Power supply	280 watts with variable speed fan, autosensing, 85% PSU															
Preloaded operating system²⁰			Accessories			Supports ThinkVantage® technologies										
- Genuine Windows® 7 Professional 32			2GB PC3-8500 DDR3 UDIMM			Climate Savers®-compliant										
Preloaded applications⁵ (only some listed)			500GB SATA 3.0Gb/s Disk (7200 rpm)			EPEAT™ Gold rating										
• Rescue and Recovery™			1TB SATA 3.0Gb/s Disk (7200 rpm)			ENERGY STAR® 5.0-compliant										
• ThinkVantage System Update			Blu-ray™ Burner SATA 1.5Gb/s Drive			GREENGUARD® certified										
• ThinkVantage Power Manager			DisplayPort to Single-link DVI-D Cable			RoHS-compliant										
• ThinkVantage Toolbox			DisplayPort to VGA Monitor Cable													
• Norton™ Internet Security 2011 (30 days of virus definitions)			NVIDIA® Quadro® 256MB NVS 295													
• Adobe® Reader®			More accessories on O-M58 sheet													
• Adobe Flash® Player			Acc Guide in pdf lenovo.com/accessoriesguide													
• Microsoft Office 2010 preloaded; purchase product key to activate			Other accessories at lenovo.com/accessories													
• Roxio® Creator® Business Edition (DVD±RW)																
• Roxio MyDVD® (DVD±RW)																
Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																

Memory

Small 8910/7360/6258/7638/9964/7483/7220/6137/6234, and
Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639
use desktop memory:
2GB PC3-8500 DDR3 UDIMM 45J5435 ann 11/18/08

More information at

www.lenovo.com/support/desktopmemorycompatibility

Optical

All:

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max⁴ 41N5618 ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive 0A65618 ann 08/23/11

Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639
support:

Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 ann 03/31/09

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 ann 08/19/08

USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11
USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11
Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Graphics

Small 8910/7360/6258/7638/9964/7483/7220/6137/6234 support Low

Profile:

ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07
NVIDIA® Quadro® 512MB FX 380 LP
(DP, DVI with a DVI to VGA converter) 57Y4396 ann 02/02/10
NVIDIA Quadro 512MB NVS 300 DMS59
(2-DVI or 2-VGA via DMS59 dongles) 0A36528 ann 04/26/11
NVIDIA Quadro 512MB 400
(DP, DVI with a DVI to VGA converter) 0A36535 ann 06/28/11
NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 ann 02/02/10
NVIDIA GeForce 310 512MB DMS59
(2-DVI or 2-VGA via DMS59 dongles) 57Y4167 ann 03/02/10

Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639
support 75 watts max:

ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07
NVIDIA Quadro 256MB NVS 295 (2-DP) 45K1669 ann 04/21/09
NVIDIA Quadro 512MB NVS 450 (4-DP/4-DVI) 57Y4398 ann 01/19/10
NVIDIA Quadro 512MB NVS 300 DMS59 0A36528 ann 04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI) 0A36535 ann 06/28/11
NVIDIA Quadro 1GB 2000 (2-DP, DVI-I) 57Y4479 ann 10/26/10
NVIDIA GeForce 310 512MB (DP, VGA) 57Y4397 ann 02/02/10
NVIDIA GeForce 310 512MB DMS59 57Y4167 ann 03/02/10

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

Keyboard

Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard 31P7415 ann 06/04/02
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse⁵² 0A34032 ann 04/05/11
Lenovo USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

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

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

Mouse

Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
Lenovo Wireless Laser Mouse⁵² 0A36188 ann 12/20/11

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

Multimedia

ThinkPad® In-Ear Headphones with mic⁶⁰ 57Y4488 ann 01/07/10
⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Security

Kensington® MicroSaver® Cable Lock⁵⁶ 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock⁵⁶ 45K1620 ann 09/30/08
Lenovo Security Cable Lock⁵⁶ 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)⁶⁹ 2448MB6 ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)⁶⁹ 2572MB6 ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)⁶⁹ 4420MB2 ann 09/13/11
⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

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

Monitor Accessories⁴⁶

Eco Ultra Small 8820/7359/7637/9961/7479/6136 support:
Lenovo Vertical PC and Monitor Stand II 41R4474 ann 01/27/09

All:

Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable 45J7915 ann 08/05/08
DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
DisplayPort to DisplayPort Monitor Cable 0A36537 ann 09/13/11
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington MicroSaver Cable Lock⁵⁶ 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock⁵⁶ 45K1620 ann 09/30/08
Lenovo Security Cable Lock⁵⁶ 57Y4303 ann 08/24/10
ThinkCentre Extend Arm 57Y4352 ann 07/06/10
⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M70e Small and
Lenovo ThinkCentre M70e Tower



Lenovo ThinkCentre M70e Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M70e Small
with optional PS/2 keyboard and mouse ports



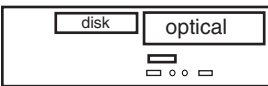
Lenovo ThinkCentre M70e Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M70e Tower
with optional PS/2 keyboard and mouse ports



Lenovo ThinkCentre M70e Tower

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date		
✖ 0809-C5U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB ²	DVD±RW	GMA	Pro 32	None	Aug 10		
✖ 0809-F2U	4x3	Pentium E5800	3.20	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 64	None	Apr 11		
✖ 0809-B3U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10		
✖ 0809-E6U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11		
✖ 0809-C6U	4x3	Core 2 Duo E8400	3.00	6MB	2	4GB	500GB	DVD±RW	GMA	Pro 64	None	Aug 10		
✖ 0809-F1U	4x3	Core 2 Duo E8500	3.16	6MB	2	3GB	320GB	DVD±RW	GMA	Pro 64	None	Apr 11		
<ul style="list-style-type: none">• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	Essential business features, exceptional value Intel® Pentium® Processor E5500 or E5800 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 or E8500 with dual-core , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket							Small <div><div>disk</div><div>optical</div></div>						
Implementation								Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed						
Memory	2GB, 3GB, or 4GB std , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available							Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3						
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter							<ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.5 lb (6.6 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation						
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening							Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7													
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar													
eSATA port	None							Supports ThinkVantage® technologies						
Diskette drive	None													
Media reader	None							GREENGUARD® certified RoHS-compliant						
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)							Limited Warranty¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ International Warranty Service⁹➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	One internal speaker for business audio													
IEEE 1394	None													
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®													
Intel AMT	None													
Modem	None													
Security chip	None													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	240 watts, autosensing, active Power Factor Correction													
Preloaded operating system²⁰			Accessories											
- <i>Some:</i> Genuine Windows® 7 Professional 32			2GB PC3-8500 DDR3 UDIMM 45J5435											
- <i>Some:</i> Genuine Windows 7 Professional 64			DisplayPort™ to Single-link DVI-D Cable 45J7915											
Preloaded applications⁵ (all OSes; only some listed)			DisplayPort to VGA Monitor Cable 57Y4393											
• Rescue and Recovery™			ADD2 DVI-D Monitor Connection (HDCP) 43R1985											
• ThinkVantage System Update			NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397											
• ThinkVantage Power Manager			NVIDIA Quadro® 512MB FX 380 LP (DP,DVI) 57Y4396											
• ThinkVantage Toolbox			More accessories on O-M70E sheet											
• Norton™ Internet Security 2011 (30 days of virus definitions)			Acc Guide in pdf lenovo.com/accessoriesguide											
• Adobe® Reader®			Other accessories at lenovo.com/accessories											
• Adobe Flash® Player														
• Skype™ for Windows														
• Microsoft Office 2010 preloaded; purchase product key to activate														
• Corel® Burn.Now™ (DVD±RW)														
• Corel DVD MovieFactory® (DVD±RW)														

See footnotes for important warranty information

✖ US models announced March 22, 2011; previous models on August 3, 2010 or March 8, 2011

✖ US model withdrawn effective November 2011

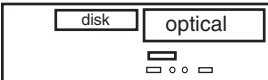
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(MANL1-1) March 2011

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date												
0822-B6U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB ²	DVD±RW	GMA	Pro 32	None	Aug 10												
<ul style="list-style-type: none">• This model has a 1-year limited warranty¹• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)																								
Positioning Processor	Essential business features, exceptional value Intel® Core™ 2 Duo Processor E8400 with dual-core, 1333MHz system bus, and 6MB L2 cache							Small <div><div>disk</div><div>optical</div></div>																
Implementation	Processor in LGA775 socket																							
Memory	2GB std , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available							Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed																
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter							Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3																
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH7 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), three SATA connectors on planar							• Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 99mm H • 14.5 lb (6.6 kg) in maximum configuration • Highlighted optical drive button for easy access • System floor stand for vertical orientation																
SATA controller																								
SATA DVD±RW																								
SATA cables																								
eSATA port	None							Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement																
Diskette drive	None																							
Media reader	None																							
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																							
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)							Supports ThinkVantage® technologies																
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)																							
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																							
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																							
Speaker	One internal speaker for business audio							GREENGUARD® certified RoHS-compliant																
IEEE 1394	None																							
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																							
Intel AMT	None																							
Modem	None							Limited Warranty¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																
Security chip	None																							
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo							Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32																
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																							
Power supply	240 watts, autosensing, active Power Factor Correction							Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)</td><td>57Y4396</td></tr></table> More accessories on O-M70E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories					2GB PC3-8500 DDR3 UDIMM	45J5435	DisplayPort™ to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)	57Y4396
2GB PC3-8500 DDR3 UDIMM	45J5435																							
DisplayPort™ to Single-link DVI-D Cable	45J7915																							
DisplayPort to VGA Monitor Cable	57Y4393																							
ADD2 DVI-D Monitor Connection (HDCP)	43R1985																							
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397																							
NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)	57Y4396																							
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)																								

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
0830-H8U	4x3	Pentium E5500	2.80	2MB	2	1GB	250GB ²	DVD	GMA	Pro 32	None	Aug 10
0830-H9U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-M4U	4x3	Pentium E5700	3.00	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Mar 11
0830-F2U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-F4U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K1U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K7U	4x3	Core 2 Duo E8500	3.16	6MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K2U	4x3	Core 2 Duo E8500	3.16	6MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K3U	4x3	Core 2 Quad Q9500	2.83	6MB	4	4GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10

- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® Processor E5500 or E5700 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 or E8500 with dual-core , 1333MHz system bus, and 6MB L2 cache or Intel Core 2 Quad Processor Q9500 with quad-core , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket	Small  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.5 lb (6.6 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation																		
Implementation																				
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max⁸, PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available																			
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter																			
SATA disk	250GB or 320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																			
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive																			
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																			
eSATA port	None																			
Diskette drive	None																			
Media reader	None																			
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																			
Speaker	One internal speaker for business audio																			
IEEE 1394	None																			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																			
Intel AMT	None																			
Modem	None																			
Security chip	None																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																			
Power supply	240 watts, autosensing, active Power Factor Correction																			
Preloaded operating system²⁰ - Genuine Windows® 7 Professional 32																				
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)																				
Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)</td><td>57Y4396</td></tr><tr><td colspan="2">More accessories on O-M70E sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>			2GB PC3-8500 DDR3 UDIMM	45J5435	DisplayPort™ to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)	57Y4396	More accessories on O-M70E sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories	
2GB PC3-8500 DDR3 UDIMM	45J5435																			
DisplayPort™ to Single-link DVI-D Cable	45J7915																			
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See footnotes for important warranty information

US model announced February 8, 2011; previous models on August 3, 2010

US models withdrawn effective November 2011

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(MANL1-3) February 2011

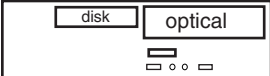
Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁶	SATA disk	SATA optical	Graphics	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
0843-C3U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB ²	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0843-C4U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0843-C5U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	DVD±RW	GMA	ES50	Pro 32	None	Aug 10

- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® Processor E5500 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 with dual-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		Small <div><div>disk</div><div>optical</div></div> <p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed</p>																		
Implementation	Processor in LGA775 socket		Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3																		
Memory	2GB or 3GB std, 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3																		
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB [2GB models] or 1277MB [3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		<ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.5 lb (6.6 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation																		
SATA disk	320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement <p>Supports ThinkVantage® technologies</p> <p>Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant</p>																		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																				
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																				
eSATA port	None																				
Diskette drive	None																				
Media reader	None																				
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																				
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)																				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																				
Speaker	One internal speaker for business audio																				
IEEE 1394	None																				
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																				
Intel AMT	None																				
Modem	None																				
Security chip	None																				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																				
Power supply	240 watts, autosensing, 85% PSU																				
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32		Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)</td><td>57Y4396</td></tr><tr><td colspan="2">More accessories on O-M70E sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>		2GB PC3-8500 DDR3 UDIMM	45J5435	DisplayPort™ to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)	57Y4396	More accessories on O-M70E sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories	
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Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)																					

ThinkCentre® M70e Small (0833) - GMP (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Chassis intr switch	Win7 preload	Global (G) GMP (P)	Avail date
0833-B1U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB ²	DVD±RW	GMA	Switch	Pro 32	G P	Aug 10
<ul style="list-style-type: none">• This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)													
Positioning Processor	<i>Essential business features, exceptional value</i> Intel® Core™ 2 Duo Processor E8400 with dual-core , 1333MHz system bus, and 6MB L2 cache								Small				
Implementation	Processor in LGA775 socket												
Memory	2GB std , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available								Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed				
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter								Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3				
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts								<ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.5 lb (6.6 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar												
eSATA port	None												
Diskette drive	None												
Media reader	None												
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)										Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement• Chassis intrusion switch		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	One internal speaker for business audio												
IEEE 1394	None												
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®												
Intel AMT	None												
Modem	None												
Security chip	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo												
Power supply	240 watts, autosensing, active Power Factor Correction												
Preloaded operating system²⁰			Accessories					Supports ThinkVantage® technologies					
- Genuine Windows® 7 Professional 32			2GB PC3-8500 DDR3 UDIMM			45J5435							
			DisplayPort™ to Single-link DVI-D Cable			45J7915							
Preloaded applications⁵ (only some listed)			DisplayPort to VGA Monitor Cable			57Y4393							
• Rescue and Recovery™			ADD2 DVI-D Monitor Connection (HDCP)			43R1985							
• ThinkVantage System Update			NVIDIA® GeForce® 310 512MB (DP, VGA)			57Y4397							
• ThinkVantage Power Manager			NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)			57Y4396							
• ThinkVantage Toolbox			More accessories on O-M70E sheet										
• Norton™ Internet Security 2011 (30 days of virus definitions)			Acc Guide in pdf lenovo.com/accessoriesguide										
• Adobe® Reader®			Other accessories at lenovo.com/accessories										
• Adobe Flash® Player													
• Skype™ for Windows													
• Microsoft Office 2010 preloaded; purchase product key to activate													
• Corel® Burn.Now™ (DVD±RW)													
• Corel DVD MovieFactory® (DVD±RW)													
Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378													

See footnotes for important warranty information
 US model announced August 3, 2010

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 (MANL1-5) August 2010

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Graphics	Win7 preload	Global Educ	Avail date
0806-C1U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB ²	None	DVD±RW		GMA	Pro 32	None	Aug 10
0806-E1U	4x3	Pentium E5800	3.20	2MB	2	2GB	320GB	None	DVD±RW		GMA	Pro 32	None	Apr 11
0806-B3U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 64	None	Aug 10
0806-E2U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 64	None	Apr 11
0806-D2U	4x3	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	None	DVD±RW	Media	GMA	Pro 64	None	Mar 11
0806-C5U	4x3	Core 2 Duo E8400	3.00	6MB	2	4GB	500GB	None	DVD±RW		GMA	Pro 64	None	Aug 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® Processor E5500 or E5800 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 with dual-core , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 20.7 lb (9.4 kg) in max configuration• Handle on top front• Highlighted optical drive button for easy access <div><div>optical</div><div>■■■■■</div><div>DISK</div></div> Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length,full-height, PCI Express x16 (60w max) Slot 2: half-length,full-height, PCI Express x1 Slot 3: half-length,full-height, 32-bit PCI 2.3 Slot 4: half-length,full-height, 32-bit PCI 2.3																
Implementation	Processor in LGA775 socket																		
Memory	2GB, 3GB, or 4GB std , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available																		
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter																		
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<div>Security<ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement</div> <div>Supports ThinkVantage® technologies</div> <div>GREENGUARD® certified RoHS-compliant</div> <div>Limited Warranty¹<ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div>																
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																		
eSATA port	None																		
Diskette drive	None																		
Media reader	<i>Some:</i> Single Slot SD Media Card Reader																		
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)																		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																		
Speaker	One internal speaker for business audio																		
IEEE 1394	None																		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																		
Intel AMT	None																		
Modem	None																		
Security chip	None																		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																		
Power supply	280 watts with variable speed fan, manual switch																		
Preloaded operating system²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Professional 32- <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)		Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td colspan="2">More accessories on O-M70E sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>		2GB PC3-8500 DDR3 UDIMM	45J5435	DisplayPort™ to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	More accessories on O-M70E sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories	
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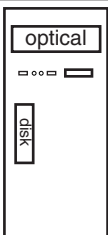
See footnotes for important warranty information

US models announced March 22, 2011; previous models on August 3, 2010 or March 8, 2011

US model withdrawn effective November 2011

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(MANL1-6) March 2011

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ^a	SATA disk	2nd Disk Bay	SATA optical	Media reader	Graphics	Win7 preload	Global Educ	Avail date											
0829-N3U	4x3	Pentium E5500	2.80	2MB	2	1GB	250GB ²	None	DVD		GMA	Pro 32	None	Aug 10											
0829-M6U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10											
0829-T2U	4x3	Pentium E5700	3.00	2MB	2	2GB	320GB	None	DVD±RW	Media	GMA	Pro 32	None	Mar 11											
0829-E9U	4x3	Core 2 Duo E7500	2.93	3MB	2	1GB	250GB	None	DVD		GMA	Pro 32	None	Aug 10											
0829-F1U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	None	DVD±RW		GMA	Pro 32	None	Aug 10											
0829-F3U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB	None	DVD±RW		GMA	Pro 32	None	Aug 10											
0829-N2U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10											
0829-F6U	4x3	Core 2 Duo E8500	3.16	6MB	2	2GB	250GB	None	DVD±RW		GMA	Pro 32	None	Aug 10											
0829-N4U	4x3	Core 2 Duo E8500	3.16	6MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10											
0829-N5U	4x3	Core 2 Quad Q9500	2.83	6MB	4	4GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10											
<ul style="list-style-type: none">• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																									
Positioning Processor	Essential business features, exceptional value Intel® Pentium® Processor E5500 or E5700 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 or E8500 with dual-core , 1333MHz system bus, and 6MB L2 cache or Intel Core 2 Quad Processor Q9500 with quad-core , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket							Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 20.7 lb (9.4 kg) in max configuration• Handle on top front• Toolless top cover removal• Highlighted optical drive button for easy access																	
Implementation								Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed																	
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max^a, PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available							Slot 1: half-length, full-height, PCI Express x16 (60w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																	
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter																								
SATA disk	250GB or 320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts							Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement																	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																								
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive																								
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																								
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																								
eSATA port	None							GREENGUARD® certified RoHS-compliant																	
Diskette drive	None																								
Media reader	<i>Some:</i> Single Slot SD Media Card Reader																								
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																								
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																								
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Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																								
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Power supply	280 watts with variable speed fan, manual switch																								
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32 Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)							Accessories <table><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td><td>41N5618</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr></table> More accessories on O-M70E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories								2GB PC3-8500 DDR3 UDIMM	45J5435	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	DisplayPort™ to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® GeForce® 310 512MB (DP, VGA)
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Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service®⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																									

See footnotes for important warranty information

US model announced February 8, 2011; previous models on August 3, 2010

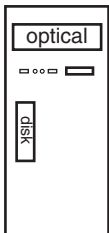
US models withdrawn effective November 2011

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(MANL1-7) February 2011

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
⚡ 0842-C1U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB ²	None	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0842-C3U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	None	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0842-C4U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	None	DVD±RW	GMA	ES50	Pro 32	None	Aug 10

- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® Processor E5500 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 with dual-core, 1333MHz system bus, and 6MB L2 cache			Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 20.7 lb (9.4 kg) in max configuration• Handle on top front• Highlighted optical drive button for easy access 																			
Implementation	Processor in LGA775 socket																						
Memory	2GB or 3GB std , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available																						
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB [2GB models] or 1277MB [3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter																						
SATA disk	320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length,full-height, PCI Express x16 (60w max) Slot 2: half-length,full-height, PCI Express x1 Slot 3: half-length,full-height, 32-bit PCI 2.3 Slot 4: half-length,full-height, 32-bit PCI 2.3																			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																						
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																						
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																						
eSATA port	None			Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement																			
Diskette drive	None																						
Media reader	None																						
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			Supports ThinkVantage® technologies																			
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)																						
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																						
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																						
Speaker	One internal speaker for business audio			Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant																			
IEEE 1394	None																						
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																						
Intel AMT	None																						
Modem	None			Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																			
Security chip	None																						
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																						
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Power supply	280 watts with variable speed fan, autosensing, 85% PSU																						
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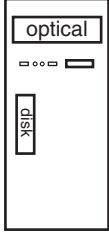
See footnotes for important warranty information
US models announced August 3, 2010

⚡ US model withdrawn effective November 2011

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(MANL1-8) November 2010

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	Win7 preload	Global (G) GMP (P)	Avail date
0832-B1U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB ²	None	DVD±RW	GMA	Switch	Pro 32	G P	Aug 10

- This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Core™ 2 Duo Processor E8400 with dual-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket			Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 20.7 lb (9.4 kg) in max configuration• Handle on top front• Toolless top cover removal• Highlighted optical drive button for easy access 
Implementation				
Memory	2GB std , 4GB max ⁹ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available			
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter			
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length, full-height, PCI Express x16 (60w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 32				
Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				
Accessories 2GB PC3-8500 DDR3 UDIMM 45J5435 DisplayPort™ to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 More accessories on O-M70E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories				
Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement• Chassis intrusion switch				
Supports ThinkVantage® technologies				
GREENGUARD® certified RoHS-compliant				
Limited Warranty ¹ <ul style="list-style-type: none">↪ 3-year parts and labor↪ International Warranty Service®↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)↪ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)↪ ThinkPlus services at lenovo.com/thinkplus/warranty↪ Post warranty maintenance services available↪ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378				

Memory

2GB PC3-8500 DDR3 UDIMM 45J5435 ann 11/18/08

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**DVD-ROM DL SATA 1.5Gb/s 16X-48X Max⁴ 41N5618 ann 09/26/06

Lenovo® Super Multi-Burner SATA Drive 0A65618 ann 08/23/11

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 ann 01/24/06

500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 ann 11/06/07

1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 ann 08/19/08

USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09

USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09

USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08

USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11

USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11

Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Graphics

Small 0809/0822/0830/0833/0843 support Low Profile:

DisplayPort™ to Single-link DVI-D Cable⁵⁰ 45J7915 ann 08/05/08DisplayPort to VGA Monitor Cable⁵⁰ 57Y4393 ann 08/04/09DisplayPort to DisplayPort Monitor Cable⁵⁰ 0A36537 ann 09/13/11

ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07

NVIDIA® Quadro® 512MB FX 380 LP

(DP, DVI with a DVI to VGA converter) 57Y4396 ann 11/06/07

NVIDIA Quadro 512MB NVS 300 DMS59

(2-DVI or 2-VGA via DMS59 dongles) 0A36528 ann 04/26/11

NVIDIA Quadro 512MB 400

(DP, DVI with a DVI to VGA converter) 0A36535 ann 06/28/11

NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 ann 02/02/10

NVIDIA GeForce 310 512MB DMS59

(2-DVI or 2-VGA via DMS59 dongles) 57Y4167 ann 03/02/10

Tower 0806/0829/0832/0842 support:

DisplayPort to Single-link DVI-D Cable⁵⁰ 45J7915 ann 08/05/08DisplayPort to VGA Monitor Cable⁵⁰ 57Y4393 ann 08/04/09DisplayPort to DisplayPort Monitor Cable⁵⁰ 0A36537 ann 09/13/11

ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07

NVIDIA Quadro 512MB NVS 300 DMS59 0A36528 ann 04/26/11

NVIDIA Quadro 512MB 400 (DP, DVI) 0A36535 ann 06/28/11

NVIDIA Quadro 1GB 2000 (2-DP, DVI-I) 57Y4479 ann 10/26/10

NVIDIA GeForce 310 512MB (DP, VGA) 57Y4397 ann 02/02/10

NVIDIA GeForce 310 512MB DMS59 57Y4167 ann 03/02/10

⁵⁰ Attaches to the ThinkCentre compatible DisplayPort graphic card.More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard 73P5220 ann 06/21/05

Preferred Pro Full Size PS/2 Keyboard 31P7415 ann 06/04/02

Enhanced Performance USB Keyboard 73P2620 ann 03/23/04

Ultraslim Plus Wireless Keyboard and Mouse⁵² 0A34032 ann 04/05/11

ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09

Lenovo USB Fingerprint Keyboard 73P4730 ann 02/22/05

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03

ThinkPad® USB Laser Mouse 57Y4635 ann 12/15/09

Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02

Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07

Lenovo Wireless Laser Mouse⁵² 0A36188 ann 12/20/11More information at www.lenovo.com/support/mice**Multimedia**ThinkPad In-Ear Headphones with mic⁶⁰ 57Y4488 ann 01/07/10⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Modem**

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

SecurityKensington® MicroSaver® Cable Lock⁵⁶ 73P2582 ann 12/29/03Kensington Twin Head Cable Lock⁵⁶ 45K1620 ann 09/30/08Lenovo Security Cable Lock⁵⁶ 57Y4303 ann 08/24/10

USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)⁶⁹ 2448MB6 ann 09/13/11

ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 ann 10/20/09

ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 ann 10/20/09

ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)⁶⁹ 2572MB6 ann 09/13/11ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)⁶⁹ 4420MB2 ann 09/13/11⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 ann 11/11/08

Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09

ThinkVision Soundbar 45K1263 ann 09/16/08

Kensington MicroSaver Cable Lock⁵⁶ 73P2582 ann 12/29/03Kensington Twin Head Cable Lock⁵⁶ 45K1620 ann 09/30/08Lenovo Security Cable Lock⁵⁶ 57Y4303 ann 08/24/10

ThinkCentre Extend Arm 57Y4352 ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M71e Small and
Lenovo ThinkCentre M71e Tower



Lenovo ThinkCentre M71e Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M71e Small



Lenovo ThinkCentre M71e Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M71e Tower



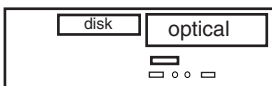
Lenovo ThinkCentre M71e Tower

ThinkCentre® M71e Small (3134) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 prelad
3134-A7U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-A8U	3x3	Pentium G840	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-A9U	3x3	Pentium G620	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-B6U	3x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-B8U	3x3	Core i3-2120	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-B9U	3x3	Pentium G630	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Live• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.5 lb (6.6 kg) in maximum configuration• Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information

US models announced September 6, 2011; previous models on June 7 or August 9, 2011

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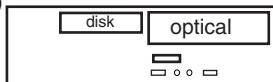
(MOSC1-1) September 2011

ThinkCentre® M71e Small (3134) - TopSeller - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload	Ann date (mm/dd/yy)
3134-C1U	3x3	Core i3-2130	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/06/11
3134-C2U	3x3	Pentium G850	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/06/11
3134-C3U	3x3	Pentium G630	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/13/11
3134-C4U	3x3	Pentium G850	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/13/11
3134-C5U	3x3	Core i3-2120	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/13/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Essential business features, exceptional value</i> Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)		
Implementation	Processor in LGA1155 socket				
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display				
DP dongle	None				
Disk	SATA 3.0Gb/s 7200 rpm				
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset				
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar				
eSATA port	None				
Media reader	None				
Chipset	Intel H61 Express Chipset				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec				
Speaker	Internal speaker for business audio				
IEEE 1394	None				
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®				
Intel AMT	None				
Modem	None				
Security chip	None				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo				
Floor Stand	System floor stand for vertical orientation				
Power supply	240 watts, autosensing, active Power Factor Correction				
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.2" W X 15.0" D X 3.9" H● 335mm W X 382mm D X 99mm H● 14.5 lb (6.6 kg) in maximum configuration● Highlighted optical drive button for easy access				
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed				
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1				
					Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement
					GREENGUARD® certified RoHS-compliant
					Supports ThinkVantage Technologies
					For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available				

See footnotes for important warranty information
US models announced December 6 or 13, 2011


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(MOSC1-14) December 2011

ThinkCentre® M71e Small (3157)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
3157-C2U	3x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C5U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C6U	3x3	Pentium G840	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C7U	3x3	Pentium G620	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C8U	3x3	Pentium G620	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C9U	3x3	Core i5-2400	4GBx2 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-F1U	3x3	Pentium G850	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Essential business features, exceptional value</i> Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Live• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.5 lb (6.6 kg) in maximum configuration• Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
				
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• <i>Some:</i> Chassis intrusion switch GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

US model announced December 6, 2011; previous models on June 7, 2011

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(MOSC1-2) December 2011

ThinkCentre® M71e Small (3176) - ENERGY STAR® 5.2

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
3176-A6U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	ES5.2	N N	Pro 64

- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		Preloaded operating system Genuine Windows® 7 Professional 64	
Implementation	Processor in LGA1155 socket		Preloaded applications ²⁰ (only some listed)	
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets		<ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.2" W X 15.0" D X 3.9" H● 335mm W X 382mm D X 99mm H● 14.5 lb (6.6 kg) in maximum configuration● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
<div><div>disk</div><div>optical</div><div><div></div><div></div><div></div><div></div></div></div>				
Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement● Chassis intrusion switch				
Climate Saver-compliant EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant				
Supports ThinkVantage Technologies				
For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet				
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information
US model announced June 7, 2011

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ThinkCentre® M71e Small (3167) - GMP

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
3167-A1U	3x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Core™ i3-2100 Processor (2 cores / 4 threads , 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 32	
Implementation	Processor in LGA1155 socket		Preloaded applications ²⁰ (only some listed)	
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets		<ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.2" W X 15.0" D X 3.9" H● 335mm W X 382mm D X 99mm H● 14.5 lb (6.6 kg) in maximum configuration● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
<div><div>disk</div><div>optical</div><div><div></div><div></div><div></div><div></div></div></div>				
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information
US model announced June 7, 2011

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(MOSC1-4) July 2011

ThinkCentre® M71e Small (5033) - ES 5.2 (GMP)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
5033-A1U	3x3	Core i3-2100	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Switch	Stand	ES5.2	G P	Pro 64

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		Preloaded operating system Genuine Windows® 7 Professional 64		
Implementation	Processor in LGA1155 socket		Preloaded applications ²⁰ (only some listed)		
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets		<ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display				
DP dongle	None				
Disk	SATA 3.0Gb/s 7200 rpm				
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset				
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar				
eSATA port	None				
Media reader	None				
Chipset	Intel H61 Express Chipset				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec				
Speaker	Internal speaker for business audio				
IEEE 1394	None				
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®				
Intel AMT	None				
Modem	None				
Security chip	None				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo				
Floor Stand	System floor stand for vertical orientation				
Power supply	240 watts, autosensing, 85% PSU				
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.2" W X 15.0" D X 3.9" H● 335mm W X 382mm D X 99mm H● 14.5 lb (6.6 kg) in maximum configuration● Highlighted optical drive button for easy access				
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed				
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1				
<div><div>disk</div><div>optical</div><div><div></div><div></div><div></div><div></div></div></div>				Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement● Chassis intrusion switch	
				Climate Saver-compliant EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant	
				Supports ThinkVantage Technologies	
				For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available				

See footnotes for important warranty information
US model announced July 26, 2011

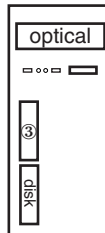
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Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload
3133-A2U	3x4	Core i3-2100	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A3U	3x4	Pentium G840	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A4U	3x4	Pentium G620	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A6U	3x4	Core i5-2400	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A8U	3x4	Core i3-2120	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A9U	3x4	Pentium G630	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.3" W X 16.6" D X 15.3" H● 160mm W X 422mm D X 388mm H● 20.7 lb (9.4 kg) in maximum configuration● Handle on top front● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement
GREENGUARD® certified RoHS-compliant
Supports ThinkVantage Technologies
For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet

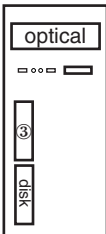


ThinkCentre® M71e Tower (3133) - TopSeller - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload	Ann date (mm/dd/yy)
3133-B1U	3x4	Core i3-2130	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/06/11
3133-B2U	3x4	Pentium G850	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/06/11
3133-B3U	3x4	Pentium G630	2GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/13/11
3133-B4U	3x4	Pentium G850	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/13/11
3133-B5U	3x4	Core i3-2120	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/13/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.3" W X 16.6" D X 15.3" H● 160mm W X 422mm D X 388mm H● 20.7 lb (9.4 kg) in maximum configuration● Handle on top front● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
 US models announced December 6 or 13, 2011

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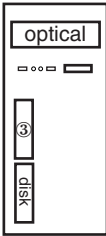
ThinkCentre® M71e Tower (3156)

Personal Systems Reference (PSREF)

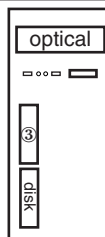
Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload
3156-C8U	3x4	Core i5-2400	4GBx2 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-C9U	3x4	Core i3-2100	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-D1U	3x4	Pentium G840	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-D2U	3x4	Pentium G620	2GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-F1U	3x4	Pentium G850	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Live• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 20.7 lb (9.4 kg) in maximum configuration• Handle on top front• Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			



Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• <i>Some:</i> Chassis intrusion switch
GREENGUARD® certified RoHS-compliant
Supports ThinkVantage Technologies
For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet



See footnotes for important warranty information

US model announced December 6, 2011; previous models on June 7, 2011

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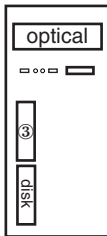
(MOSC1-6) December 2011

ThinkCentre® M71e Tower (3175) - ENERGY STAR® 5.2

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload
3175-B2U	3x4	Core i3-2100	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	Switch	ES5.2	N N	Pro 64

- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		Preloaded operating system Genuine Windows® 7 Professional 64	
Implementation	Processor in LGA1155 socket		Preloaded applications ²⁰ (only some listed)	
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets		<ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.3" W X 16.6" D X 15.3" H● 160mm W X 422mm D X 388mm H● 20.7 lb (9.4 kg) in maximum configuration● Handle on top front● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
				
Limited Warranty ¹		3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model announced June 7, 2011

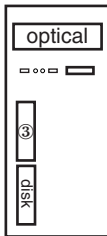
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(MOSC1-7) July 2011

ThinkCentre® M71e Tower (3166) - GMP

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preloaded
3166-A1U	3x4	Core i3-2100	2GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		Preloaded operating system Genuine Windows® 7 Professional 32 Preloaded applications ²⁰ (only some listed) ● Rescue and Recovery™ ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe Reader® ● Skype™ for Windows ● Microsoft® Live ● Microsoft Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in LGA1155 socket		
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
DP dongle	None		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel H61 Express Chipset		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.3" W X 16.6" D X 15.3" H● 160mm W X 422mm D X 388mm H● 20.7 lb (9.4 kg) in maximum configuration● Handle on top front● Highlighted optical drive button for easy access		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed		
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1		
			
Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement● Chassis intrusion switch			
GREENGUARD® certified RoHS-compliant			
Supports ThinkVantage Technologies			
For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information
US model announced June 7, 2011

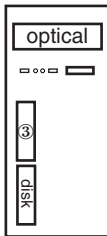
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(MOSC1-8) July 2011

ThinkCentre® M71e Tower (3177) - ES 5.2 (GMP)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preload
3177-A1U	3x4	Core i3-2100	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	Switch	ES5.2	G P	Pro 64

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64	
Implementation	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets		Preloaded applications ²⁰ (only some listed)	
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets		<ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.3" W X 16.6" D X 15.3" H● 160mm W X 422mm D X 388mm H● 20.7 lb (9.4 kg) in maximum configuration● Handle on top front● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
				
		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement● Chassis intrusion switch		
		Climate Saver-compliant EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant		
		Supports ThinkVantage Technologies		
		For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet		
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information
US model announced July 26, 2011

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(MOSC1-13) August 2011

Memory

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Graphics

Small 3134/3157/3176/3167/5033 support Low Profile:

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to DisplayPort Monitor Cable ⁵⁰	0A36537	ann 09/13/11
NVIDIA® Quadro® 1GB 600 (DP, DVI with a DVI to VGA converter) ⁶⁷	0A36183	ann 10/26/10
NVIDIA® GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) ⁶⁷	57Y4167	ann 03/02/10

Tower 3133/3156/3175/3166/3177 support:

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to DisplayPort Monitor Cable ⁵⁰	0A36537	ann 09/13/11
NVIDIA Quadro 1GB 600 (DP, DVI) ⁶⁷	0A36183	ann 10/26/10
NVIDIA GeForce 310 512MB DMS59 ⁶⁷	57Y4167	ann 03/02/10

⁵⁰ Attaches to the ThinkCentre compatible DisplayPort graphic card.⁶⁷ Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
UltraSlim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	ann 12/08/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Headphone P550	55Y2065	

⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Modem**

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

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M71z All-In-One
(Wireless Keyboard & mouse on selected models only)



Lenovo ThinkCentre M71z All-In-One



Lenovo ThinkCentre M71z All-In-One



Handle



Lenovo ThinkCentre M71z All-In-One



Lenovo ThinkCentre M71z All-In-One

ThinkCentre® M71z (1654) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global	Win7 preload
1654-A2U	G530	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	None	None	Serial	None	None	USB	None	Pro 64

- Best space saving solution & excellent cable management
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 1-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) ● Rescue and Recovery™ ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW) ● Corel WinDVD® (DVD±RW)	
Implementation	Processor in LGA1155 socket		
Memory	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
eSATA port	None		
Media reader	None		
Chipset	Intel H61 Express Chipset	Security ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Boot sequence control ● Boot without keyboard and mouse ● USB port disablement ● Chassis intrusion switch EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN ⁴	None		
Bluetooth™	None		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2x2w) with amplifier		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo		
Power supply	150 watts AC adapter, autosensing, 85% PSU		
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> ● Business black color ● 20.0" W X 4.0" D X 16.2" H ● 507mm W X 101mm D X 411mm H (including stand) ● 16.4 lb (7.5 kg) in maximum configuration ● Handle in rear ● Support VESA mount (100mm) ● Removable feet		
Limited Warranty ¹²	1-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

See footnotes for important warranty information
US model announced September 20, 2011

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(MTGB1-7) September 2011

ThinkCentre® M71z (1761) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global	Win7 preload
1761-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1761-A2U	G840	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1761-A3U	G620	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1761-B1U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1761-B3U	G530	2GBx1	20.0" HD+	None	320G 7200	DVD±RW	Intel HD	None	None	Serial	None	None	USB	None	Pro 64

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Preloaded operating system²⁰ Genuine Windows® 7 Professional 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)• Corel WinDVD® (DVD±RW)
Implementation		
Memory	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 1920x1080 (DisplayPort)@60Hz	
DP dongle	None	
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Multi-touch	None	
Camera	<i>Some:</i> Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off	
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off	
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
eSATA port	None	
Media reader	None	
Chipset	Intel H61 Express Chipset	
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2	
Bluetooth™	None	
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB	
Audio	High Definition (HD) Audio, Realtek ALC269Q	
Speaker	Two internal stereo speakers (2x2w) with amplifier	
Intel AMT	None	
Modem	None	
IEEE 1394	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo	
Power supply	150 watts AC adapter, autosensing, 85% PSU	
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">• Business black color• 20.0" W X 4.0" D X 16.2" H• 507mm W X 101mm D X 411mm H (including stand)• 16.4 lb (7.5 kg) in maximum configuration• Handle in rear• Support VESA mount (100mm)• Removable feet	Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard and mouse• USB port disablement• Chassis intrusion switch EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet
Limited Warranty ¹²	3-years, limited onsite service²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	

See footnotes for important warranty information

US model announced September 20, 2011; previous models on August 9 or 23, 2011

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Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse Global	Win7 preload	Ann date (mm/dd/yy)
1761-B4U	i5-2500S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64 11/08/11
1761-B5U	i3-2130	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64 11/08/11
1761-B6U	G850	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64 11/08/11
1761-B7U	i3-2130	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 32 11/08/11
1761-B8U	G440	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64 11/08/11

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- *These models have a 3-year limited warranty*
- *These systems are Microsoft Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Celeron® G440 Processor (1 cores / 1 threads , 1.6GHz, 1MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium® G850 Processor (2 cores / 2 threads , 2.9GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2130 Processor (2 cores / 4 threads , 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500S Processor (4 cores / 4 threads , 2.7GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Preloaded operating system <i>Some:</i> Genuine Windows® 7 Professional 32 <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● Corel WinDVD® (DVD±RW)
Implementation		
Memory	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 1920x1080 (DisplayPort)@60Hz	
DP dongle	None	
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Multi-touch	None	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off	
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off	
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
eSATA port	None	
Media reader	8-in-1 Single Slot SD media reader	
Chipset	Intel H61 Express Chipset	
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN ⁴	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2	
Bluetooth™	None	
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB	
Audio	High Definition (HD) Audio, Realtek ALC269Q	
Speaker	Two internal stereo speakers (2x2w) with amplifier	
Intel AMT	None	
Modem	None	
IEEE 1394	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	EPEAT™ Gold rating
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo	Climate Saver-compliant
Power supply	150 watts AC adapter, autosensing, 85% PSU	ENERGY STAR® 5.2-compliant
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 16.4 lb (7.5 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet	TCO Certified Edge
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	GREENGUARD® certified
		RoHS-compliant
		Supports ThinkVantage Technologies
		For compatible accessories, please go to O-M71Z sheet;
		For ThinkPlus™ service upgrade options, please go to S-TC sheet

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse Global	Win7 preload	Ann date (mm/dd/yy)	
1761-B2U	G630	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64	12/06/11
1761-C5U	i7-2600S	4GBx2	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64	12/06/11
1761-C6U	i5-2400S	4GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64	12/06/11
1761-C7U	i5-2500S	4GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64	12/06/11

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- These models have a 3-year limited warranty
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Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600S Processor (4 cores / 8 threads, 2.8GHz, 8MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)• Corel WinDVD® (DVD±RW)
Implementation		
Memory	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>	
DP dongle	None	
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Multi-touch	None	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off	
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off	
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
eSATA port	None	
Media reader	<i>Some:</i> 8-in-1 Single Slot SD media reader	
Chipset	Intel H61 Express Chipset	
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN ⁴	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2	
Bluetooth™	None	
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB	
Audio	High Definition (HD) Audio, Realtek ALC269Q	
Speaker	Two internal stereo speakers (2x2w) with amplifier	
Intel AMT	None	
Modem	None	
IEEE 1394	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard and mouse• USB port disablement• Chassis intrusion switch
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	EPEAT™ Gold rating
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo	Climate Saver-compliant
Power supply	150 watts AC adapter, autosensing, 85% PSU	ENERGY STAR® 5.2-compliant
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">• Business black color• 20.0" W X 4.0" D X 16.2" H• 507mm W X 101mm D X 411mm H (including stand)• 16.4 lb (7.5 kg) in maximum configuration• Handle in rear• Support VESA mount (100mm)• Removable feet	TCO Certified Edge
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	GREENGUARD® certified
		RoHS-compliant
		Supports ThinkVantage Technologies
		For compatible accessories, please go to O-M71Z sheet;
		For ThinkPlus™ service upgrade options, please go to S-TC sheet

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card	Media reader	Chassis intr switch	Serial port	PS/2 port	Keyboard /Mouse Global	Win7 preload	Ann date (mm/dd/yy)
1761-D7U	G530	2GBx1	20.0" HD+	None	250G 7200	DVD±RW	Intel HD	None	None	None	Serial	None	USB	None	Pro 64 12/13/11
1761-D8U	G630	2GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	None	None	Serial	None	USB	None	Pro 64 12/13/11
1761-D9U	i3-2120	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	None	None	Serial	None	USB	None	Pro 64 12/13/11

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- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium® G630 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● Corel WinDVD® (DVD±RW)
Implementation	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Memory		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 1920x1080 (DisplayPort)@60Hz	
DP dongle	None	
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Multi-touch	None	
Camera	<i>Some:</i> Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off	
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off	
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
eSATA port	None	
Media reader	None	
Chipset	Intel H61 Express Chipset	
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN ⁴	<i>Some:</i> 11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2	
Bluetooth™	None	
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB	
Audio	High Definition (HD) Audio, Realtek ALC269Q	
Speaker	Two internal stereo speakers (2x2w) with amplifier	
Intel AMT	None	
Modem	None	
IEEE 1394	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo	
Power supply	150 watts AC adapter, autosensing, 85% PSU	
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 16.4 lb (7.5 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet	Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Boot sequence control● Boot without keyboard and mouse● USB port disablement EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global	Win7 preload
1782-C1U	G620	2GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64
1782-C2U	G840	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1782-C3U	i3-2100	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1782-C4U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1782-H2U	i5-2500S	4GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64

- Best space saving solution & excellent cable management
- These models have a 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● Corel WinDVD® (DVD±RW)
Processor	Intel® Pentium® G620 Processor (2 cores / 2 threads , 2.6GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads , 2.8GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads , 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400S Processor (4 cores / 4 threads , 2.5GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500S Processor (4 cores / 4 threads , 2.7GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		
Implementation	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Memory	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>		
Graphics	None		
DP dongle	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Display	None		
Multi-touch	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Camera	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Controls	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
Optical	None		
eSATA port	<i>Some:</i> 8-in-1 Single Slot SD media reader		
Media reader	Intel H61 Express Chipset		
Chipset	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector		
Rear ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Side ports	One PCI Express® Mini Card slot		
PCIe Mini Card	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2		
PCIe WLAN ⁴	None		
Bluetooth™	One gigabit ethernet port, Realtek® RTL8111E-VB		
Ethernet	High Definition (HD) Audio, Realtek ALC269Q		
Audio	Two internal stereo speakers (2x2w) with amplifier		
Speaker	None		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo		
Power supply	150 watts AC adapter, autosensing, 85% PSU		
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 16.4 lb (7.5 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet		
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch
EPEAT™ Gold rating
Climate Saver-compliant
ENERGY STAR® 5.2-compliant
TCO Certified Edge
GREENGUARD® certified
RoHS-compliant
Supports ThinkVantage Technologies
For compatible accessories, please go to O-M71Z sheet;
For ThinkPlus™ service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US model announced December 6, 2011; previous models on August 9, 2011

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Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global (G) GMP (P)	Win7 preload
1962-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64

- Best space saving solution & excellent cable management
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● Corel WinDVD® (DVD±RW)
Implementation	Processor in LGA1155 socket		
Memory	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 1920x1080 (DisplayPort)@60Hz		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
eSATA port	None		
Media reader	8-in-1 Single Slot SD media reader		
Chipset	Intel H61 Express Chipset		
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN ⁴	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2		
Bluetooth™	None		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2x2w) with amplifier		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo		
Power supply	150 watts AC adapter, autosensing, 85% PSU ¹		
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.0" D X 16.2" H● 507mm W X 101mm D X 411mm H (including stand)● 16.4 lb (7.5 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet		
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

Security - Security chip (see information on left) - Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) - Boot sequence control - Boot without keyboard and mouse - USB port disablement - Chassis intrusion switch		
EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant		
Supports ThinkVantage Technologies		
For compatible accessories, please go to O-M71Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information
 US model announced September 27, 2011

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 (MTGB1-5) October 2011

ThinkCentre® M71z (1664) - Multi-touch (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intr switch	Serial port	PS/2 port	Keyboard /Mouse	Global	Win7 preload
1664-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Switch	Serial	None	USB	None	Pro 64
1664-A3U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None	Pro 64
1664-A4U	i5-2500S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None	Pro 64
1664-A5U	i7-2600S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None	Pro 64
1664-A6U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None	Pro 64
1664-A7U	i5-2500S	4GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None	Pro 64
1664-A9U	i5-2400S	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	None	None	Serial	None	USB	None	Pro 64

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>		Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● Corel WinDVD® (DVD±RW)
Processor	Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600S Processor (4 cores / 8 threads, 2.8GHz, 8MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		
Implementation	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Memory			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>		
DP dongle	None		
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	Supports Multi-touch function		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off		
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off		
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
eSATA port	None		
Media reader	<i>Some:</i> 8-in-1 Single Slot SD media reader		
Chipset	Intel H61 Express Chipset		
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	One PCI Express® Mini Card slot		
PCIe WLAN ⁴	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2		
Bluetooth™	None		
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB		
Audio	High Definition (HD) Audio, Realtek ALC269Q		
Speaker	Two internal stereo speakers (2x2w) with amplifier		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo		
Power supply	150 watts AC adapter, autosensing, 85% PSU		
Machine	<i>Model(s) with multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.2" D X 16.2" H● 507mm W X 107mm D X 411mm H (including stand)● 19.5 lb (8.9 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet		
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		

Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Boot sequence control● Boot without keyboard and mouse● USB port disablement● <i>Some:</i> Chassis intrusion switch
EPEAT™ Gold rating
Climate Saver-compliant
ENERGY STAR® 5.2-compliant
TCO Certified Edge
GREENGUARD® certified
RoHS-compliant
Supports ThinkVantage Technologies
For compatible accessories, please go to O-M71Z sheet;
For ThinkPlus™ service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US models announced December 13, 2011; previous models on August 9, August 23, or November 8, 2011

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(MTGB1-3) December 2011

ThinkCentre® M71z (1677) - Multi-touch

Personal Systems Reference (PSREF)

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global	Win7 preload
1677-A1U	i3-2100	2GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	None	None	None	USB	None	Pro 32
1677-B6U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64

- Best space saving solution & excellent cable management
- These models have a 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Preloaded operating system ²⁰ <i>Some:</i> Genuine Windows® 7 Professional 32 <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)• Corel WinDVD® (DVD±RW)
Implementation	Processor in LGA1155 socket	
Memory	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 1920x1080 (DisplayPort) @60Hz	
DP dongle	None	
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Multi-touch	Supports Multi-touch function	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off	
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off	
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
eSATA port	None	
Media reader	None	
Chipset	Intel H61 Express Chipset	Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard and mouse• USB port disablement• Chassis intrusion switch EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN ⁴	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2	
Bluetooth™	None	
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB	
Audio	High Definition (HD) Audio, Realtek ALC269Q	
Speaker	Two internal stereo speakers (2x2w) with amplifier	
Intel AMT	None	
Modem	None	
IEEE 1394	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo	
Power supply	150 watts AC adapter, autosensing, 85% PSU	
Machine	<i>Model(s) with multi-touch, Frame stand:</i> <ul style="list-style-type: none">• Business black color• 20.0" W X 4.2" D X 16.2" H• 507mm W X 107mm D X 411mm H (including stand)• 19.5 lb (8.9 kg) in maximum configuration• Handle in rear• Support VESA mount (100mm)• Removable feet	
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	

See footnotes for important warranty information
US models announced August 9, 2011

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ThinkCentre® M71z (1938) - Multi-touch (GMP)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global (G) GMP (P)	Win7 preload
1938-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64

- Best space saving solution & excellent cable management
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Preloaded operating system ²⁰ Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● Corel WinDVD® (DVD±RW)
Implementation	8GB max ⁷ , PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Memory		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 1920x1080 (DisplayPort)@60Hz	
DP dongle	None	
Display	20.0" (508mm) HD+ (1600x900) TFT color , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Multi-touch	Supports Multi-touch function	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off	
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off	
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
eSATA port	None	
Media reader	8-in-1 Single Slot SD media reader	
Chipset	Intel H61 Express Chipset	
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express® Mini Card slot	
PCIe WLAN ⁴	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2	
Bluetooth™	None	
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB	
Audio	High Definition (HD) Audio, Realtek ALC269Q	
Speaker	Two internal stereo speakers (2x2w) with amplifier	
Intel AMT	None	
Modem	None	
IEEE 1394	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo	
Power supply	150 watts AC adapter, autosensing, 85% PSU	
Machine	<i>Model(s) with multi-touch, Frame stand:</i> <ul style="list-style-type: none">● Business black color● 20.0" W X 4.2" D X 16.2" H● 507mm W X 107mm D X 411mm H (including stand)● 19.5 lb (8.9 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet	Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Boot sequence control● Boot without keyboard and mouse● USB port disablement● Chassis intrusion switch
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available	
	EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
US model announced September 27, 2011

©Lenovo
(MTGB1-6) October 2011

Memory

2GB PC3-10600 DDR3 SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 SODIMM	55Y3711	ann 03/02/10

More information at

www.lenovo.com/support/desktopmemorycompatibility

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	ann 12/08/09
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

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

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

Mouse

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

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

Multimedia

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

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Stand

ThinkCentre Extend Arm	57Y4352	ann 07/06/10
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Monitors

ThinkVision® L1711p 17" (VGA, DVI-D) ⁶⁸	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D) ⁶⁸	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11

⁶⁸ Requires a DisplayPort Monitor Cable (DisplayPort to Single-Link DVI-D or DisplayPort to VGA Analog).

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M75e Small and
Lenovo ThinkCentre M75e Tower



Lenovo ThinkCentre M75e Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M75e Small



Lenovo ThinkCentre M75e Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M75e Tower



Lenovo ThinkCentre M75e Tower

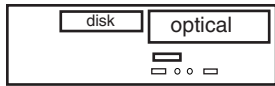
Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date																																																				
4163-B2U	4x3	Sempron 145	2.80	1GB	250GB ²	DVD	None	3000	VGA, DVI-D	Prem 32	None	Oct 10																																																				
<ul style="list-style-type: none">• This small and medium business (SMB) model is part of the US TopSeller™ Program• This model has a 1-year limited warranty¹• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)																																																																
Positioning Processor	Essential business features, exceptional value AMD® Sempron™ Processor 145 with single-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache Processor in Socket AM3							Small <div><div>disk</div><div>optical</div><div><div></div><div></div><div></div><div></div></div></div>																																																								
Implementation																																																																
Memory	1GB std , 16GB max ^a , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller							Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed																																																								
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz							Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.9 lb (6.8 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation																																																								
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																																																															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710																																																															
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive																																																															
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors																																																															
eSATA port	None																																																															
Diskette drive	None																																																															
Media reader	None																																																															
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O																																																															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																															
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)																																																															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																																															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																																																															
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																																																															
Speaker	One internal speaker for business audio																																																															
IEEE 1394	None																																																															
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																																																															
Modem	None																																																															
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																																																															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																																																															
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																																																															
Power supply	240 watts, autosensing, active Power Factor Correction																																																															
<table><tr><td colspan="4">Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 32</td><td colspan="4">Accessories 2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® Quadro® 512MB FX 380 LP 57Y4396 NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet</td><td colspan="5"></td></tr><tr><td colspan="4">Preloaded applications⁵ (only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate</td><td colspan="4">Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories</td><td colspan="5"></td></tr></table>													Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 32				Accessories 2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® Quadro® 512MB FX 380 LP 57Y4396 NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet									Preloaded applications⁵ (only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate				Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories																																		
Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 32				Accessories 2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® Quadro® 512MB FX 380 LP 57Y4396 NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet																																																												
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<table><tr><td colspan="13">Security<ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement</td></tr><tr><td colspan="13">Supports ThinkVantage® technologies</td></tr><tr><td colspan="13">GREENGUARD® certified RoHS-compliant</td></tr><tr><td colspan="13">Limited Warranty¹<ul style="list-style-type: none">➤ 1-year parts and labor➤ International Warranty Service®➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</td></tr></table>													Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement													Supports ThinkVantage® technologies													GREENGUARD® certified RoHS-compliant													Limited Warranty¹ <ul style="list-style-type: none">➤ 1-year parts and labor➤ International Warranty Service®➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378												
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ThinkCentre® M75e Small (5042) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5042-A5U	4x3	Athlon II X2 B22	2.80	2GB	320GB ²	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10
5042-A9U	4x3	Athlon II X2 B24	3.00	2GB	320GB	DVD±RW	Media	3000	VGA, DVI-D	Pro 64	None	Jun 11
5042-A6U	4x3	Phenom II X2 B53	2.80	3GB	320GB	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10
5042-A7U	4x3	Athlon II X4 640	3.00	4GB	500GB	DVD±RW		3000	VGA, DVI-D	Pro 64	None	Oct 10

• These small and medium business (SMB) models are part of the US TopSeller™ Program
 • These models have a 3-year limited warranty¹
 • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value AMD® Athlon™ II X2 Processor B22 or B24 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or AMD Athlon II X4 Processor 640 with quad-core , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3	Small  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed
Implementation		Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3
Memory	2GB, 3GB, or 4GB std, 16GB max^a, UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	<ul style="list-style-type: none"> • Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 99mm H • 14.9 lb (6.8 kg) in maximum configuration • Highlighted optical drive button for easy access • System floor stand for vertical orientation
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz	Security <ul style="list-style-type: none"> • One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	<i>Some:</i> Single Slot SD Media Card Reader	
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	Supports ThinkVantage® technologies
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	GREENGUARD® certified RoHS-compliant
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Modem	None	
Security chip	Winbond® WPC210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	Limited Warranty¹ <ul style="list-style-type: none"> ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ <ul style="list-style-type: none"> • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	240 watts, autosensing, active Power Factor Correction	
Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)		Accessories 2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® Quadro® 512MB FX 380 LP 57Y4396 NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories

See footnotes for important warranty information

US model announced May 24, 2011; previous models on September 21, 2010

US model withdrawn effective November 2011

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(ASPNI-2) June 2011

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5054-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB ²	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5054-A2U	4x3	Phenom II X2 B53	2.80	3GB	320GB	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5054-A3U	4x3	Athlon II X4 640	3.00	4GB	500GB	DVD±RW	None	3000	VGA, DVI-D	Pro 64	None	Oct 10

- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value AMD® Athlon™ II X2 Processor B22 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or AMD Athlon II X4 Processor 640 with quad-core , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core)		Small <div><div>diskoptical</div><div></div></div> <p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed</p> <p>Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.9 lb (6.8 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation																											
Implementation	Processor in Socket AM3																													
Memory	2GB, 3GB, or 4GB std, 16GB max^a, UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller																													
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz		<div>Security<ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O co• USB port disablement</div> <div>Supports ThinkVantage® technologies</div> <div>GREENGUARD® certified RoHS-compliant</div> <div>Limited Warranty¹<ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div>																											
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See footnotes for important warranty information

US models announced September 21, 2010

⚠ US model withdrawn effective November 2011

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(ASPNI-4) October 2010

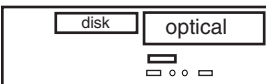
Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5062-A2U	4x3	Athlon II X2 B22	2.80	2GB	320GB ²	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5062-A3U	4x3	Phenom II X2 B53	2.80	3GB	320GB	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10

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Positioning Processor	Essential business features, exceptional value AMD® Athlon™ II X2 Processor B22 with dual-core, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Phenom™ II X2 Processor B53 with dual-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3		Small <div><div>disk</div><div>optical</div></div>																
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Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5058-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB ²	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10

- **This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty**
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NVIDIA® Quadro® 512MB FX 380 LP	57Y4396																								
NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397																								
NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167																								
More accessories on O-M75E sheet																									
Acc Guide in pdf lenovo.com/accessoriesguide																									
Other accessories at lenovo.com/accessories																									
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)			Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																						

ThinkCentre® M75e Small (5064) - ES 5.0 (GMP) - Windows 7

Personal Systems Reference (PSREF)

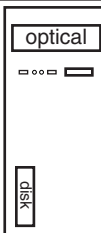
Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5064-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB ²	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10
<ul style="list-style-type: none">• This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)												
Positioning Processor	Essential business features, exceptional value AMD® Phenom™ II X2 Processor B53 with dual-core , integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3							Small <div><div>disk</div><div>optical</div></div>				
Implementation								Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed				
Memory	2GB std, 16GB max ⁸ , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller							Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3				
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz							<ul style="list-style-type: none">• Business black color; metal case• 13.2" W X 15.0" D X 3.9" H• 335mm W X 382mm D X 99mm H• 14.9 lb (6.8 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation				
SATA disk	320GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts									Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710											
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar											
eSATA port	None											
Diskette drive	None											
Media reader	None											
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	One internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®											
Modem	None											
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant									Supports ThinkVantage® technologies		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo									EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	240 watts, autosensing, 85% PSU											
Preloaded operating system²⁰			Accessories									
- Genuine Windows® 7 Professional 32			2GB PC3-10600 DDR3 UDIMM			57Y4390						
Preloaded applications⁵ (only some listed)			DisplayPort™ to Single-link DVI-D Cable			45J7915						
• Rescue and Recovery™			NVIDIA® Quadro® 512MB FX 380 LP			57Y4396						
• ThinkVantage System Update			NVIDIA GeForce® 310 512MB (DP, VGA)			57Y4397						
• ThinkVantage Power Manager			NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)			57Y4167						
• ThinkVantage Toolbox			More accessories on O-M75E sheet									
• Norton™ Internet Security 2011 (30 days of virus definitions)			Acc Guide in pdf lenovo.com/accessoriesguide									
• Adobe® Reader®			Other accessories at lenovo.com/accessories									
• Skype™ for Windows												
• Microsoft Office 2010 preloaded; purchase product key to activate												
• Corel® Burn.Now™ (DVD±RW)												
• Corel DVD MovieFactory® (DVD±RW)												
Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378												

See footnotes for important warranty information
 US model announced October 12, 2010

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 (ASPNI-7) October 2010

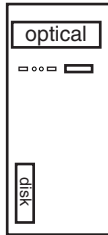
Type-model	Slot x bay	Processor	GHz	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
4162-A3U	4x3	Sempron 145	2.80	1GB	250GB ²	None	DVD	None	3000	VGA, DVI-D	Prem 32	None	Oct 10

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 1-year limited warranty¹**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> AMD® Sempron™ Processor 145 with single-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache Processor in Socket AM3			Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 21.2 lb (9.6 kg) in max configuration• Handle on top front• Highlighted optical drive button for easy access 										
Implementation														
Memory	1GB std, 16GB max⁸, UDIMM, PC3-10600 1333MHz DDR3[*] , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail [*] System automatically clocks down for processors with 1066MHz DDR3 memory controller													
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz			Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader [*] Bay ③ 3.5", 1" high, no access, std disk [*] bay only available on models with media reader installed Slot 1: half-length,full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length,full-height, PCIe 2.0 x1 Slot 3: half-length,full-height, PCIe 2.0 x1 Slot 4: half-length,full-height, 32-bit PCI 2.3										
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710													
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive													
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors													
eSATA port	None													
Diskette drive	None			Supports ThinkVantage® technologies										
Media reader	None													
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O			GREENGUARD® certified RoHS-compliant										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)			Limited Warranty¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	One internal speaker for business audio													
IEEE 1394	None													
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®													
Modem	None													
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	280 watts with variable speed fan, manual switch													
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Home Premium 32				Accessories <table><tr><td>2GB PC3-10600 DDR3 UDIMM</td><td>57Y4390</td></tr><tr><td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td><td>41N5618</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)</td><td>57Y4167</td></tr></table> More accessories on O-M75E sheet	2GB PC3-10600 DDR3 UDIMM	57Y4390	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	DisplayPort™ to Single-link DVI-D Cable	45J7915	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167
2GB PC3-10600 DDR3 UDIMM	57Y4390													
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Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate														
Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories														

ThinkCentre® M75e Tower (5041) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date														
5041-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB ²	None	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10														
5041-A6U	4x3	Athlon II X2 B24	3.00	2GB	320GB	None	DVD±RW	Media	3000	VGA, DVI-D	Pro 64	None	Jun 11														
5041-A2U	4x3	Phenom II X2 B53	2.80	3GB	320GB	None	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10														
5041-A3U	4x3	Athlon II X4 640	3.00	4GB	500GB	None	DVD±RW		3000	VGA, DVI-D	Pro 64	None	Oct 10														
<ul style="list-style-type: none">• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																											
Positioning Processor	Essential business features, exceptional value AMD® Athlon™ II X2 Processor B22 or B24 with dual-core, integrated 1066 MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Phenom™ II X2 Processor B53 with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or AMD Athlon II X4 Processor 640 with quad-core, integrated 1333 MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3							Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 21.2 lb (9.6 kg) in max configuration• Handle on top front• Highlighted optical drive button for easy access 																			
Memory	2GB, 3GB, or 4GB std, 16GB max ⁸ , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller							Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed		Slot 1: half-length,full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length,full-height, PCIe 2.0 x1 Slot 3: half-length,full-height, PCIe 2.0 x1 Slot 4: half-length,full-height, 32-bit PCI 2.3																	
Graphics	ATI™ Radeon™ 3000, integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D)@60Hz									Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement																	
SATA disk	320GB or 500GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710																										
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																										
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar																										
eSATA port	None																										
Diskette drive	None																										
Media reader	Some: Single Slot SD Media Card Reader																										
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O																										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																										
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)																										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)									Supports ThinkVantage® technologies																	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																										
Speaker	One internal speaker for business audio																										
IEEE 1394	None									GREENGUARD® certified RoHS-compliant																	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																										
Modem	None																										
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant									Limited Warranty ¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ International Warranty Service⁹➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																										
Power supply	280 watts with variable speed fan, manual switch																										
<table><tr><td colspan="4">Preloaded operating system²⁰<ul style="list-style-type: none">- Some: Genuine Windows® 7 Professional 32- Some: Genuine Windows 7 Professional 64Preloaded applications⁵ (all OSEs; only some listed)<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)</td><td colspan="10">Accessories<ul style="list-style-type: none">2GB PC3-10600 DDR3 UDIMM 57Y4390DisplayPort™ to Single-link DVI-D Cable 45J7915NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167More accessories on O-M75E sheetAcc Guide in pdf lenovo.com/accessoriesguideOther accessories at lenovo.com/accessories</td></tr></table>														Preloaded operating system ²⁰ <ul style="list-style-type: none">- Some: Genuine Windows® 7 Professional 32- Some: Genuine Windows 7 Professional 64 Preloaded applications ⁵ (all OSEs; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				Accessories <ul style="list-style-type: none">2GB PC3-10600 DDR3 UDIMM 57Y4390DisplayPort™ to Single-link DVI-D Cable 45J7915NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167More accessories on O-M75E sheetAcc Guide in pdf lenovo.com/accessoriesguideOther accessories at lenovo.com/accessories									
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See footnotes for important warranty information

US model announced May 24, 2011; previous models on September 21, 2010

US model withdrawn effective November 2011

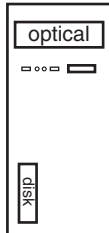
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(ASPNI-9) June 2011

- *These models have a 3-year limited warranty¹*
- *These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

See footnotes for important warranty information
US models announced September 21, 2010
US model withdrawn effective November 2011

Type-model	Slot x bay	Processor	GHz	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5061-A4U	4x3	Athlon II X2 B22	2.80	2GB	320GB ²	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5061-A5U	4x3	Phenom II X2 B53	2.80	3GB	320GB	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10

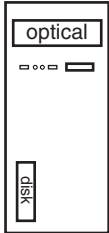
- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value AMD® Athlon™ II X2 Processor B22 with dual-core, integrated 1066 MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Phenom™ II X2 Processor B53 with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3		Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 21.2 lb (9.6 kg) in max configuration• Handle on top front• Highlighted optical drive button for easy access		
Implementation					
Memory	2GB or 3GB std , 16GB max ⁸ , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed		
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @ 75Hz; 1920x1200 (DVI-D) @ 60Hz</i>		Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3		
SATA disk	320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar				
eSATA port	None				
Diskette drive	None		Supports ThinkVantage® technologies		
Media reader	None				
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec				
Speaker	One internal speaker for business audio				
IEEE 1394	None				
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378		
Modem	None				
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo				
Power supply	280 watts with variable speed fan, autosensing, 85% PSU				
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32		Accessories <ul style="list-style-type: none">2GB PC3-10600 DDR3 UDIMM 57Y4390DisplayPort™ to Single-link DVI-D Cable 45J7915NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167More accessories on O-M75E sheetAcc Guide in pdf lenovo.com/accessoriesguideOther accessories at lenovo.com/accessories			
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)					

See footnotes for important warranty information
US models announced September 21, 2010
⚠ US model withdrawn effective November 2011

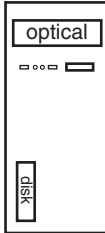
Type-model	Slot x bay	Processor	GHz	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5057-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB ²	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10

- **This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> AMD® Phenom™ II X2 Processor B53 with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3		Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 21.2 lb (9.6 kg) in max configuration• Handle on top front• Highlighted optical drive button for easy access					
Implementation								
Memory	2GB std , 16GB max ⁸ , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller							
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3					
SATA disk	320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710							
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive							
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar							
eSATA port	None		Supports ThinkVantage® technologies					
Diskette drive	None							
Media reader	None		GREENGUARD® certified RoHS-compliant					
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O							
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		Limited Warranty¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ International Warranty Service⁹➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378					
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)							
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)							
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)							
Audio	High Definition (HD) Audio, Realtek® ALC662 codec							
Speaker	One internal speaker for business audio							
IEEE 1394	None							
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®							
Modem	None							
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant							
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 32					
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo					Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)		
Power supply	280 watts with variable speed fan, manual switch							
Accessories 2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories								

Type-model	Slot x bay	Processor	GHz	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5063-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB ²	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10

- **This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Essential business features, exceptional value AMD® Phenom™ II X2 Processor B53 with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3		Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 16.6" D X 15.3" H• 160mm W X 422mm D X 388mm H• 21.2 lb (9.6 kg) in max configuration• Handle on top front• Highlighted optical drive button for easy access										
Implementation													
Memory	2GB std , 16GB max ⁸ , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller												
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length,full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length,full-height, PCIe 2.0 x1 Slot 3: half-length,full-height, PCIe 2.0 x1 Slot 4: half-length,full-height, 32-bit PCI 2.3										
SATA disk	320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar												
eSATA port	None												
Diskette drive	None		Supports ThinkVantage® technologies										
Media reader	None												
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	One internal speaker for business audio												
IEEE 1394	None												
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378										
Modem	None												
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo												
Power supply	280 watts with variable speed fan, autosensing, 85% PSU												
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 32		Accessories <table><tr><td>2GB PC3-10600 DDR3 UDIMM</td><td>57Y4390</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)</td><td>57Y4167</td></tr></table> More accessories on O-M75E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories		2GB PC3-10600 DDR3 UDIMM	57Y4390	DisplayPort™ to Single-link DVI-D Cable	45J7915	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167		
2GB PC3-10600 DDR3 UDIMM	57Y4390												
DisplayPort™ to Single-link DVI-D Cable	45J7915												
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397												
NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167												
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)													

Memory

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Graphics*Small 4163/5042/5046/5054/5062/5058/5064 support Low Profile:*

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable ⁵⁰	0A36537	ann 09/13/11
NVIDIA® Quadro® 512MB FX 380 LP (DP, DVI with a DVI to VGA converter)	57Y4396	ann 02/02/10
NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 4162/5041/5044/5053/5061/5057/5063 support:

DisplayPort to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable ⁵⁰	0A36537	ann 09/13/11
NVIDIA GeForce 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

⁵⁰ Attaches to the ThinkCentre compatible DisplayPort graphic card.More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
ThinkPad® USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
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⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Modem

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

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

Lenovo ThinkCentre M77 Small and Tower

ThinkCentre®



Lenovo ThinkCentre M77
Small and Tower



Lenovo ThinkCentre M77 Tower
with Lenovo ThinkVision monitor



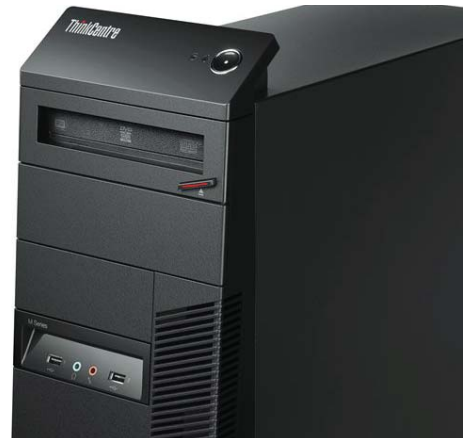
Lenovo ThinkCentre M77 Small



Lenovo ThinkCentre M77 Small
with Lenovo ThinkVision monitor



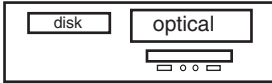
Lenovo ThinkCentre M77 Tower

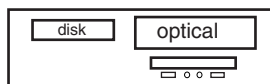


Lenovo ThinkCentre M77 Tower

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
2227-A1U	4x3	Athlon II X4 645	3.1	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A2U	4x3	Athlon II X2 B24	3.0	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A3U	4x3	Phenom II X2 B53	2.8	4GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A4U	4x3	FX 4100	3.6	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A5U	4x3	Athlon II X2 B26	3.2	2GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A6U	4x3	Phenom II X2 B53	2.8	4GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64

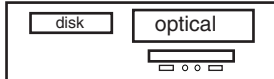
- Small and medium business (SMB) model(s), part of the US TopSeller Program
- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability AMD Athlon™ II X2 Processor B24 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Athlon II X2 Processor B26 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache AMD Athlon II X4 Processor 645 with quad-core , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) AMD FX™ Processor 4100 with quad-core , Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache Processor in Socket AM3+		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in Socket AM3+			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	ATI™ Radeon™ HD 4250 , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @ 75Hz; 2560x1600 (DisplayPort) @ 60Hz None			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD 980G Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			



Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
2209-A4U	4x3	Athlon II X2 B24	3.0	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2209-B3U	4x3	Athlon II X4 645	3.1	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2209-D5U	4x3	Sempron 150	2.9	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	Switch	None	Stand	None	N N	Pro 64

- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability AMD Sempron™ Processor 150 with single-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache AMD Athlon™ II X2 Processor B24 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Athlon II X4 Processor 645 with quad-core , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3+		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Memory				
Graphics	ATI™ Radeon™ HD 4250 , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @ 75Hz; 2560x1600 (DisplayPort) @ 60Hz</i> None			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD 980G Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3			
				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement● <i>Some:</i> Chassis intrusion switch RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M77 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

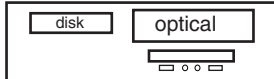
US model announced November 8, 2011; previous models on September 20, 2011

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(ABNY1-2) November 2011

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
1996-A2U	4x3	Athlon II X2 B24	3.0	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64
1996-A3U	4x3	Phenom II X2 B53	2.8	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64
1996-D7U	4x3	FX 4100	3.6	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64

- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability AMD Athlon™ II X2 Processor B24 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache AMD FX™ Processor 4100 with quad-core , Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache Processor in Socket AM3+		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in Socket AM3+			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	ATI™ Radeon™ HD 4250 , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA)@75Hz; 2560x1600 (DisplayPort)@60Hz</i> None			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD 980G Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M77 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

US model announced November 8, 2011; previous models on September 20, 2011

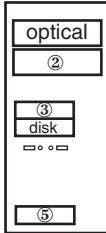
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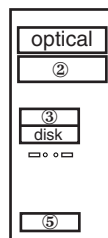
(ABNY1-3) November 2011

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preload
1997-A1U	4x3	Athlon II X2 B24	3.0	4GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	G P	Pro 32

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Mainstream enterprise stability and manageability		Preloaded operating system Genuine Windows® 7 Professional 32 Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)
Processor	AMD Athlon™ II X2 Processor B24 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)		
Implementation	Processor in Socket AM3+		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Graphics	ATI™ Radeon™ HD 4250 , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA)@75Hz; 2560x1600 (DisplayPort)@60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	AMD 980G Chipset		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3		
<div><div>disk</div><div>optical</div></div>			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global Educ	Win7 preload
1995-A1U	4x5	Athlon II X4 645	3.1	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A2U	4x5	Athlon II X2 B24	3.0	2GBx1	320G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A3U	4x5	Phenom II X2 B53	2.8	4GBx1	320G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A4U	4x5	FX 4100	3.6	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A5U	4x5	FX 4100	3.6	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	Switch	None	None	N N	Pro 64
1995-A6U	4x5	Phenom II X2 B53	2.8	4GBx1	500G 7200	Bay	DVD±RW	None	HD 5450	None	Switch	None	None	N N	Pro 64
● Small and medium business (SMB) model(s), part of the US TopSeller Program ● 3-year limited warranty ● Microsoft Office 2010 Product Key Ready (O10PKR)															
Positioning	Mainstream enterprise stability and manageability										Preloaded operating system				
Processor	AMD Athlon™ II X2 Processor B24 with dual-core, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Phenom™ II X2 Processor B53 with dual-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core)s, and 6MB shared L3 cache AMD Athlon II X4 Processor 645 with quad-core, integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) AMD FX™ Processor 4100 with quad-core, Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache Processor in Socket AM3+										Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) ● ThinkVantage® Product Recovery ● ThinkVantage System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Windows Live™ Essentials ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW)				
Implementation															
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, four 240-pin DIMM sockets														
Graphics	Some: ATI™ Radeon™ HD 4250, integrated in chipset, uses main memory, one VGA, one DisplayPort™, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; Maximum resolution: 2560x1440 (VGA)@75Hz; 2560x1600 (DP)@60Hz Some: AMD Radeon HD 5450, PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Maximum resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz														
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	AMD 980G Chipset														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, manual switch														
Machine	● Business black color; metal case ● 6.9" W X 17.4" D X 16.3" H ● 175mm W X 442mm D X 414mm H ● 24.2 lb (11.0 kg) in maximum configuration ● Handle on top front ● Power button on top handle ● Toolless cover removal ● Tilted front I/O for easy access ● Toolless disk, optical drive removal ● Toolless adapter retention														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)														
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3														
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M77 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet				



Security

- Security chip (see information on left)
- One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
- Power-on password
- Administrator password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement
- Some: Chassis intrusion switch

RoHS-compliant

Supports ThinkVantage Technologies

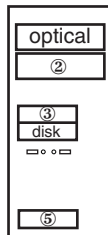
For compatible accessories, please go to O-M77 sheet;
For ThinkPlus™ service upgrade options, please go to S-TC sheet

ThinkCentre® M77 Tower (1995) - TopSeller - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global Educ	Win7 preload(mm/dd/yy)	Ann date
1995-A7U	4x5	Athlon II X2 B26	3.2	2GBx1	250G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64	12/13/11
1995-A9U	4x5	Phenom II X2 B53	2.8	4GBx1	250G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64	12/13/11

- Small and medium business (SMB) model(s), part of the US TopSeller Program
- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)


Positioning Processor	Mainstream enterprise stability and manageability AMD Athlon™ II X2 Processor B26 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core)s, and 6MB shared L3 cache Processor in Socket AM3+		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in Socket AM3+			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	ATI™ Radeon™ HD 4250 , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @ 75Hz; 2560x1600 (DisplayPort) @ 60Hz</i> None			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	AMD 980G Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M77 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
US models announced December 13, 2011

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(ABNY1-9) December 2011

ThinkCentre® M77 Tower (1990)

Personal Systems Reference (PSREF)

	Type-model	Slot x bay	Processor	GHz	Memory [®]	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global Educ	Win7 preload
	1990-A6U	4x4	Athlon II X2 B24	3.0	2GBx1	320G 7200	None	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
	1990-B6U	4x5	Athlon II X4 645	3.1	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
	1990-E1U	4x5	Sempron 150	2.9	2GBx1	320G 7200	Bay	DVD±RW	None	HD 4250	None	Switch	None	None	N N	Pro 64

- *3-year limited warranty*
- *Microsoft Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	<p><i>Maximizing mainstream enterprise stability and manageability</i></p> <p>AMD Sempron™ Processor 150 with single-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache</p> <p>AMD Athlon™ II X2 Processor B24 with dual-core, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)</p> <p>AMD Athlon II X4 Processor 645 with quad-core, integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core)</p>	<p>Preloaded operating system</p> <p>Genuine Windows® 7 Professional 64</p> <p>Preloaded applications (only some listed)</p> <ul style="list-style-type: none"> • ThinkVantage® Product Recovery • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in Socket AM3+	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets	
Graphics	<p>ATI™ Radeon™ HD 4250, integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter;</p> <p><i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 2560x1600 (DisplayPort)@60Hz</p>	
DP dongle	None	
Disk	SATA 6.0Gb/s 7200 rpm	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1	
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar	
eSATA port	None	
Media reader	None	
Chipset	AMD 980G Chipset	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
IEEE 1394	None	
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1	
Modem	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 6.9" W X 17.4" D X 16.3" H • 175mm W X 442mm D X 414mm H • 24.2 lb (11.0 kg) in maximum configuration • Handle on top front • Power button on top handle • Toolless cover removal • Tilted front I/O for easy access • Toolless disk, optical drive removal • Toolless adapter retention 	
Bay	<p>Bay 1: 5.25", 1.6" high, access, std optical</p> <p>Bay 2: 5.25", 1.6" high, access, open</p> <p>Bay 3: 3.5", 1" high, access, opt reader</p> <p>Bay 4: 3.5", 1" high, no access, std disk</p> <p>Bay 5: 3.5", 1" high, no access, opt disk (some models)</p>	
Slot	<p>Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
Limited Warranty	<p>3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available</p>	

See footnotes for important warranty information

US model announced November 8, 2011; previous models on September 20, 2011

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Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global Educ	Win7 preload
1982-A4U	4x4	Athlon II X2 B24	3.0	2GBx1	320G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64
1982-A5U	4x4	Phenom II X2 B53	2.8	4GBx1	500G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64
1982-E3U	4x5	FX 4100	3.6	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64

- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability AMD Athlon™ II X2 Processor B24 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache AMD FX™ Processor 4100 with quad-core , Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache Processor in Socket AM3+		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">● ThinkVantage® Product Recovery● ThinkVantage System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Windows Live™ Essentials● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)		
Implementation	Processor in Socket AM3+				
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets				
Graphics	ATI™ Radeon™ HD 4250 , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @75Hz; 2560x1600 (DisplayPort) @60Hz</i> None				
DP dongle	None				
Disk	SATA 6.0Gb/s 7200 rpm				
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1				
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar				
eSATA port	None				
Media reader	None				
Chipset	AMD 980G Chipset				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec				
Speaker	Internal speaker for business audio				
IEEE 1394	None				
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1				
Modem	None				
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo				
Power supply	280 watts with variable speed fan, autosensing, 85% PSU				
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 24.2 lb (11.0 kg) in maximum configuration● Handle on top front● Power button on top handle● Toolless cover removal● Tilted front I/O for easy access● Toolless disk, optical drive removal● Toolless adapter retention				
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)				
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3				
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available				

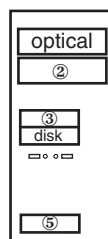
Security

- Security chip (see information on left)
- One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
- Power-on password
- Administrator password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement

EPEAT™ Gold rating
ENERGY STAR 5.2-compliant
GREENGUARD® certified
RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M77 sheet;
For ThinkPlus™ service upgrade options, please go to S-TC sheet

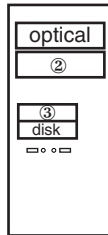


ThinkCentre® M77 Tower (1983) - ES 5.2 (GMP)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preloaded
1983-A1U	4x4	Athlon II X2 B24	3.0	4GBx1	320G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	G P	Pro 32

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Mainstream enterprise stability and manageability															Preloaded operating system				
Processor	AMD Athlon™ II X2 Processor B24 with dual-core, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)															Genuine Windows® 7 Professional 32				
Implementation	Processor in Socket AM3+															Preloaded applications (only some listed)				
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, four 240-pin DIMM sockets															<ul style="list-style-type: none">• ThinkVantage® Product Recovery• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Windows Live™ Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				
Graphics	ATI™ Radeon™ HD 4250, integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; Maximum resolution: 2560x1440 (VGA) @75Hz; 2560x1600 (DisplayPort) @60Hz																			
DP dongle	None																			
Disk	SATA 6.0Gb/s 7200 rpm																			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1																			
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar																			
eSATA port	None																			
Media reader	None																			
Chipset	AMD 980G Chipset																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)																			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																			
Speaker	Internal speaker for business audio																			
IEEE 1394	None																			
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1																			
Modem	None																			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo																			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU																			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention																			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk																			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3																			
															Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Administrator password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement					
															EPEAT™ Gold rating ENERGY STAR® 5.2-compliant GREENGUARD® certified RoHS-compliant					
															Supports ThinkVantage Technologies					
															For compatible accessories, please go to O-M77 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet					
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available																			

Memory

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Graphics

Small 2227/2209/1996/1997 support Low Profile:

NVIDIA® GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10
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Tower 1995/1990/1982/1983 support:

NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10
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Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
USB Numeric Keypad	33L3225	ann 05/10/00
Ultrastim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	ann 12/08/09
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09
Lenovo Cherry Smartcard Keyboard	0A36328	ann 05/10/11

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Speaker M0520 (black)	57Y6360	ann 02/08/11
Lenovo Speaker M0520 (red)	57Y6361	ann 01/07/10
Lenovo Headphone P550	55Y2065	

⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Modem**

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

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

Lenovo ThinkCentre M81 Small and Tower

ThinkCentre®



Lenovo ThinkCentre M81
Small and Tower



Lenovo ThinkCentre M81 Tower
with Lenovo ThinkVision monitor



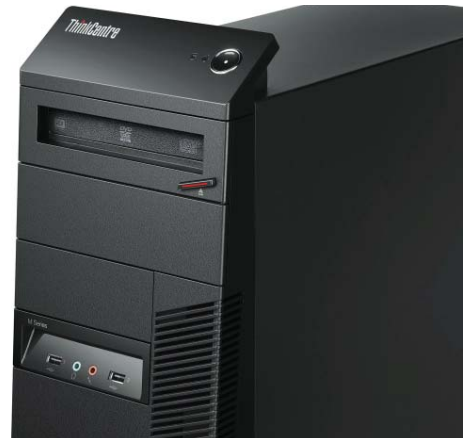
Lenovo ThinkCentre M81 Small



Lenovo ThinkCentre M81 Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M81 Tower



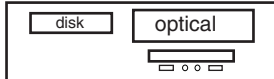
Lenovo ThinkCentre M81 Tower

ThinkCentre® M81 Small (7518) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 prelad
7518-A8U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
➤ 7518-A9U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B1U	4x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B2U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache) , Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache) , Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Memory				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
US models announced April 5, 2011

➤ US model withdrawn effective October 2011

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(METN1-3) April 2011

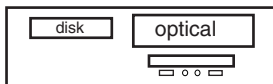
Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
7518-C5U	4x3	Core i3-2120	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller Program
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Mainstream enterprise stability and manageability						Preloaded operating system					
Processor	Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64					
Implementation	Processor in LGA1155 socket						Preloaded applications ²⁰ (only some listed)					
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets						<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)					
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, active Power Factor Correction											
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3											
<div><div>disk</div><div>optical</div><div></div></div>							Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement					
							GREENGUARD® certified RoHS-compliant					
							Supports ThinkVantage Technologies					
							For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet					
Limited Warranty ¹	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
7518-D2U	4x3	Core i3-2100	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-D3U	4x3	Core i3-2100	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 32
7518-D1U	4x3	Pentium G620	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B7U	4x3	Core i3-2120	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B6U	4x3	Pentium G630	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G620 Processor (2 cores / 2 threads , 2.6GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G630 Processor (2 cores / 2 threads , 2.7GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads , 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads , 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system <i>Some:</i> Genuine Windows® 7 Professional 32 <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

US model announced September 6, 2011; previous models on June 21 or August 23, 2011

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(METN1-15) September 2011

ThinkCentre® M81 Small (7518) - TopSeller - IV

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7518-D6U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	Switch	Stand	None	N N	Pro 32	11/08/11
7518-D4U	4x3	Core i3-2130	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	Switch	Stand	None	N N	Pro 64	11/08/11
7518-D5U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	Switch	Stand	None	N N	Pro 64	11/08/11
7518-D7U	4x3	Core i3-2120	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	12/13/11
7518-D8U	4x3	Core i3-2130	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	12/13/11
7518-D9U	4x3	Core i5-2400	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	12/13/11

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system <i>Some:</i> Genuine Windows® 7 Professional 32 <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket		<div>● Security chip (see information on left)</div> <div>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</div> <div>● Power-on password</div> <div>● Hard disk password</div> <div>● Boot sequence control</div> <div>● Boot without keyboard and mouse</div> <div>● Serial port I/O control</div> <div>● Individual USB port disablement</div> <div>● <i>Some:</i> Chassis intrusion switch</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>Supports ThinkVantage Technologies</div> <div>For compatible accessories, please go to O-M81 sheet;</div> <div>For ThinkPlus™ service upgrade options, please go to S-TC sheet</div>	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information

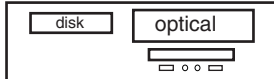
US models announced December 13, 2011; previous models on November 8, 2011

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(METN1-20) December 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 prelad
5032-C2U	4x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
5032-C3U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
5032-C4U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Memory				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

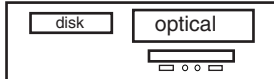
Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
5032-E2U	4x3	Core i3-2100	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
5032-E3U	4x3	Pentium G840	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G840 Processor (2 cores / 2 threads , 2.8GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads , 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket		<div>Security<ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement</div> <div>GREENGUARD® certified RoHS-compliant</div> <div>Supports ThinkVantage Technologies</div> <div>For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet</div>	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
		<div><div>disk</div><div>optical</div><div></div></div>		
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 prelad
5049-D3U	4x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-D4U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-D5U	4x3	Core i5-2500	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-D6U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

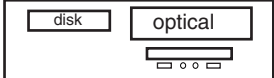
Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache) , Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache) , Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in LGA1155 socket		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

ThinkCentre® M81 Small (5049) - ENERGY STAR® 5.0 - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
5049-F1U	4x3	Core i3-2120	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-E7U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-E8U	4x3	Pentium G840	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-E9U	4x3	Pentium G620	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-H3U	4x3	Core i3-2130	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-H4U	4x3	Pentium G850	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications²⁰ (only some listed) • Rescue and Recovery™ • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe Reader® • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)				
Implementation	Processor in LGA1155 socket											
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets											
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	• Business black color; metal case • 13.3" W X 14.5" D X 3.9" H • 337mm W X 369mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk and optical drive removal • Toolless adapter retention											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies				
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information

US models announced December 6, 2011; previous models on May 24, 2011

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(METN1-10) December 2011

ThinkCentre® M81 Small (0385) - ES 5.0 (GMP)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
0385-A1U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 32	
Implementation	Processor in LGA1155 socket		Preloaded applications (only some listed)	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
<div><div>disk</div><div>optical</div><div><div></div><div></div><div></div></div></div>				
Limited Warranty		3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement				
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
Supports ThinkVantage Technologies				
For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information
US model announced April 5, 2011

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(METN1-4) April 2011

ThinkCentre® M81 Small (0385) - ES 5.0 (GMP) - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
0385-A2U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	G P	Pro 64

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller											Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) ● Rescue and Recovery™ ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe Reader® ● Skype™ for Windows ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW)										
Implementation	Processor in LGA1155 socket																					
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets																					
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>																					
DP dongle	None																					
Disk	SATA 6.0Gb/s 7200 rpm																					
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																					
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset																					
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar																					
eSATA port	None																					
Media reader	None																					
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O																					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																					
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort																					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																					
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																					
Speaker	Internal speaker for business audio																					
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®																					
Intel AMT	None																					
Modem	None																					
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																					
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo																					
Floor Stand	System floor stand for vertical orientation																					
Power supply	240 watts, autosensing, 85% PSU																					
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention																					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader																					
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3																					
<div><div>disk</div><div>optical</div><div></div></div>												Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement										
												EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant										
												Supports ThinkVantage Technologies										
												For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet										
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available																					

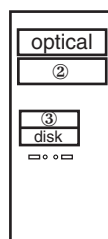
See footnotes for important warranty information
US model announced June 21, 2011

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(METN1-16) June 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preloaded
7517-A2U	4x4	Core i3-2100	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A3U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A4U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache) , Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

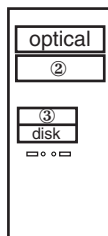


ThinkCentre® M81 Tower (7517) -TopSeller - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
7517-A5U	4x4	Core i3-2120	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in LGA1155 socket		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk		
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
			
Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement			
GREENGUARD® certified RoHS-compliant			
Supports ThinkVantage Technologies			
For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

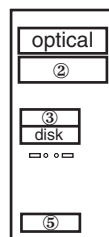
ThinkCentre® M81 Tower (7517) -TopSeller - III

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
7517-A6U	4x4	Core i3-2100	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A9U	4x5	Core i3-2120	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A8U	4x5	Pentium G630	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			



Security

- Security chip (see information on left)
- One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Serial port I/O control
- Individual USB port disablement

GREENGUARD® certified
RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M81 sheet;
For ThinkPlus™ service upgrade options, please go to S-TC sheet

See footnotes for important warranty information

US model announced September 6, 2011; previous models on June 21 or August 23, 2011

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(METN1-18) September 2011

ThinkCentre® M81 Tower (7517) -TopSeller - IV

Personal Systems Reference (PSREF)

	Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
E5	7517-B1U	4x5	Core i3-2130	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	11/08/11
	7517-B2U	4x5	Core i5-2500	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	Switch	None	N N	Pro 64	11/08/11
	7517-B3U	4x5	Core i5-2400	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	Switch	None	N N	Pro 32	11/08/11
	7517-B4U	4x5	Core i3-2120	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	12/13/11
	7517-B5U	4x5	Core i3-2130	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	12/13/11
	7517-B6U	4x5	Core i5-2400	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	12/13/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p>Mainstream enterprise stability and manageability</p> <p>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>		<p>Preloaded operating system</p> <p><i>Some:</i> Genuine Windows® 7 Professional 32</p> <p><i>Some:</i> Genuine Windows 7 Professional 64</p> <p>Preloaded applications²⁰ (only some listed)</p> <ul style="list-style-type: none"> ● Rescue and Recovery™ ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe Reader® ● Skype™ for Windows ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in LGA1155 socket		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, VGA) @60Hz		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Machine	<ul style="list-style-type: none"> ● Business black color; metal case ● 6.9" W X 17.4" D X 16.3" H ● 175mm W X 442mm D X 414mm H ● 24.2 lb (11.0 kg) in maximum configuration ● Handle on top front ● Power button on top handle ● Toolless cover removal ● Tilted front I/O for easy access ● Toolless disk, optical drive removal ● Toolless adapter retention 		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk		
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		<p>Security</p> <ul style="list-style-type: none"> ● Security chip (see information on left) ● One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement ● <i>Some:</i> Chassis intrusion switch <p>GREENGUARD® certified RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet</p>

See footnotes for important warranty information

US models announced December 13, 2011; previous models on November 8, 2011

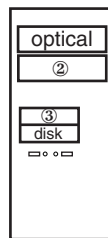
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(METN1-21) December 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preloaded
5030-D5U	4x4	Core i3-2100	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-D6U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-D7U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

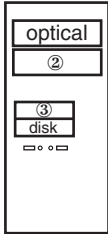


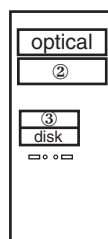
ThinkCentre® M81 Tower (5030) - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5030-E9U	4x4	Pentium G840	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-F1U	4x4	Pentium G620	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-E8U	4x4	Core i3-2100	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			



Security

- Security chip (see information on left)
- One lock to secure both cover and entire system to fixed object:
 - Padlock loop (in rear for opt padlock)
 - Security slot (in rear for optional Kensington® MicroSaver® cable)
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Serial port I/O control
- Individual USB port disablement

GREENGUARD® certified
RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M81 sheet;
For ThinkPlus™ service upgrade options, please go to S-TC sheet

ThinkCentre® M81 Tower (5030) - III

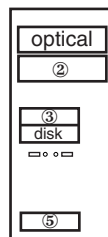
Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5030-F5U	4x4	Pentium G620	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-G1U	4x5	Core i3-2130	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in LGA1155 socket		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)		
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement	
GREENGUARD® certified RoHS-compliant	
Supports ThinkVantage Technologies	
For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	



See footnotes for important warranty information

US model announced December 6, 2011; previous model on June 21, 2011

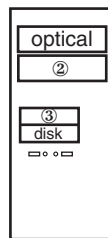
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(METN1-17) December 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5048-D3U	4x4	Core i3-2100	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-D4U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-D5U	4x4	Core i5-2500	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-D6U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Mainstream enterprise stability and manageability							Preloaded operating system			
Processor	Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket							Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none"> • Rescue and Recovery™ • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) 			
Implementation	Processor in LGA1155 socket										
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets										
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset										
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 6.9" W X 17.4" D X 16.3" H • 175mm W X 442mm D X 414mm H • 24.2 lb (11.0 kg) in maximum configuration • Handle on top front • Power button on top handle • Toolless cover removal • Tilted front I/O for easy access • Toolless disk, optical drive removal • Toolless adapter retention 										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk										
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3										
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										



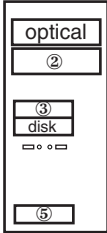
ThinkCentre® M81 Tower (5048) - ENERGY STAR® 5.0 - II

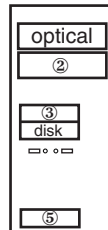
Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5048-E7U	4x4	Pentium G620	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E8U	4x4	Pentium G840	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E6U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E9U	4x4	Core i3-2120	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-F1U	4x4	Core i3-2120	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-H3U	4x5	Pentium G850	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	ES50	N N	Pro 64

• These models have a 3-year limited warranty

• These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	



See footnotes for important warranty information

US model announced December 6, 2011; previous models on May 24, 2011

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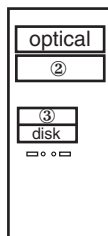
(METN1-13) December 2011

ThinkCentre® M81 Tower (1730) - ES 5.0 (GMP)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
1730-A1U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket											Preloaded operating system Genuine Windows® 7 Professional 32				
Implementation	Processor in LGA1155 socket											Preloaded applications (only some listed)				
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets											<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>															
DP dongle	None															
Disk	SATA 6.0Gb/s 7200 rpm															
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset															
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar															
eSATA port	None															
Media reader	None															
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)															
Audio	High Definition (HD) Audio, Realtek® ALC662 codec															
Speaker	Internal speaker for business audio															
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®															
Intel AMT	None															
Modem	None															
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo															
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo															
Power supply	280 watts with variable speed fan, autosensing, 85% PSU															
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention															
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk															
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3															
							Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement									
							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant									
							Supports ThinkVantage Technologies									
							For compatible accessories, please go to O-M81 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet									
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available															

ThinkCentre® M81 Tower (1730) - ES 5.0 (GMP) - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
1730-A2U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	G P	Pro 64

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		<div>Preloaded operating system</div> <div>Genuine Windows® 7 Professional 64</div> <div>Preloaded applications (only some listed)</div> <div><ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)</div>
Implementation	Processor in LGA1155 socket		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q65 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 24.2 lb (11.0 kg) in maximum configuration● Handle on top front● Power button on top handle● Toolless cover removal● Tilted front I/O for easy access● Toolless disk, optical drive removal● Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk		
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
<div><div>optical</div><div>②</div><div>③</div><div>disk</div><div>□ □ □ □</div></div>			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

<div>Security</div> <div><ul style="list-style-type: none">● Security chip (see information on left)● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement</div>
<div>EPEAT™ Gold rating</div> <div>ENERGY STAR® 5.0-compliant</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div>
<div>Supports ThinkVantage Technologies</div>
<div>For compatible accessories, please go to O-M81 sheet;</div> <div>For ThinkPlus™ service upgrade options, please go to S-TC sheet</div>

Memory

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann	01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann	01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann	04/12/11

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**

All:

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann	09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann	08/23/11

Tower 5030/5048/7517/1730 support:

Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann	03/31/09
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Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann	01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann	11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann	08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann	03/31/09
USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
Slim USB Portable DVD Burner	0A33988	ann	06/14/11

Graphics

Small 7518/5032/5049/0385 support Low Profile:

NVIDIA® Quadro® 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles) ⁶⁷	0A36528	ann	04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI with a DVI to VGA converter) ⁶⁷	0A36535	ann	06/28/11
NVIDIA Quadro 1GB 600 (DP, DVI with a DVI to VGA converter) ⁶⁷	0A36183	ann	10/26/10
NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) ⁶⁷	57Y4167	ann	03/02/10

Tower 7517/5030/5048/1730 support 75 watts max:

NVIDIA Quadro 512MB NVS 300 DMS59 ⁶⁷	0A36528	ann	04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI) ⁶⁷	0A36535	ann	06/28/11
NVIDIA Quadro 1GB 600 (DP, DVI) ⁶⁷	0A36183	ann	10/26/10
NVIDIA Quadro 1GB 2000 (2-DP, DVI-I) ⁶⁷	57Y4479	ann	10/26/10
NVIDIA GeForce 310 512MB DMS59 ⁶⁷	57Y4167	ann	03/02/10

⁶⁷ Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.

More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann	06/04/02
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann	04/05/11
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05

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

More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann	08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo Optical Mouse A6010	57Y6255		
Lenovo Mini Optical Mouse M20B	55Y2091		
Lenovo Wireless Mouse N30B	55Y9360		

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Headphone P550	55Y2065		

⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann	12/29/03
ensington Twin Head Cable Lock ⁵⁶	45K1620	ann	09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann	09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann	08/24/10
ThinkCentre Extend Arm	57Y4352	ann	07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M90z with Frame Stand



Lenovo ThinkCentre M90z with Height Adjustable Stand Option 57Y4351
(57Y4351 is not compatible to Multi-touch models)



Tool-Less Back Cover Removal



Handle



Dual Independent Display with Optional Lenovo ThinkVision Monitor

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	SATA disk	Chassis intr switch	Blue- tooth	Media reader	Light sensor	PCIe Mini Card 802.11	Stand type	Intel vPro	Global Educ	Win7 preload
3429-A1U	G6950	2.80	2GBx1	23.0" Full HD	2.0M	320GB ²					Intel 1000	Frame		None	Pro 32
3429-A2U	i3-530	2.93	2+1GB	23.0" Full HD	2.0M	500GB					Intel 1000	Frame		None	Pro 32
3429-D6U	G6960	2.93	2GBx1	23.0" Full HD	2.0M	320GB					Intel 1000	Frame		None	Pro 64
3429-D3U	i3-550	3.20	2+1GB	23.0" Full HD	2.0M	320GB					Intel 1000	Frame		None	Pro 64
3429-A3U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	500GB					Intel 1000	Frame	vPro	None	Pro 64
3429-E4U	i3-550	3.20	4GBx1	23.0" Full HD	2.0M	320GB	Switch	Blue		Sensor	Intel 1000	Lift		None	Pro 64
3429-E5U	i5-660	3.33	4GBx1	23.0" Full HD	2.0M	500GB			Media	Sensor	Intel 1000	Lift	vPro	None	Pro 64
3429-E6U	G6950	2.80	2GBx1	23.0" Full HD	2.0M	320GB				Sensor	Intel 1000	Lift		None	Pro 64
3429-E9U	i3-550	3.20	4GBx1	23.0" Full HD	2.0M	250GB					Intel 1000	Frame		None	Pro 64
<ul style="list-style-type: none">• Best space saving solution & excellent cable management• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	All-In-One PC for the enterprise Intel® Pentium® Processor G6950 or G6960 with dual-core , Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, and 3MB cache or Intel Core™ i3 Processor i3-530 or i3-550 with dual-core , Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i5 Processor i5-650 or i5-660 with dual-core , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket									All-In-One All: <ul style="list-style-type: none">• Business black color• Handle in rear• Support VESA mount (100mm)• Tool-less back cover, disk, optical drive, memory removal Model(s) with Frame stand: <ul style="list-style-type: none">• 22" W X 4.29" D X 17.4" H• 560mm W X 109mm D X 443mm H• 23.6 lb (10.7 kg) in maximum configuration Model(s) with Lift stand: <ul style="list-style-type: none">• Height Adjustable• 22" W X 9.84" D X 17.4" H• 560mm W X 250mm D X 443mm H• 29.3 lb (13.3 kg) in maximum configuration• Tilt -5°-25° All: Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)					
Implementation															
Memory	2GB, 3GB, or 4GB std, 8GB max ⁸ , PC3-10600 1333MHz DDR3* , dual-channel capable, two 204-pin SODIMM sockets (notebook) * System automatically clocks down for processors with 1066MHz DDR3 memory controller														
Graphics	Intel HD Graphics in processor, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), HDCP, DirectX® 10, one DisplayPort™ connector, supports dual independent display														
DP dongle	None									Security <ul style="list-style-type: none">• Security chip (see information left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard, mouse• Individual USB port disablement• Some: Chassis intrusion switch					
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector Some: Ambient Light Sensor														
Light sensor	None														
Multi-touch	None														
Camera	Some: Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical on/off switch														
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm														
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high														
eSATA port	None														
Diskette drive	None														
Media reader	Some: Single Slot SD Media Card Reader														
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB														
Ports	Rear: four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector Side: two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) One PCI Express Mini Card slot 11b/g/n wireless ¹³ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Some: Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator One gigabit ethernet port, Intel 82578DM High Definition (HD) Audio, Realtek® ALC269 codec Two internal speakers (2watt x 2)														
PCIe Mini Card	One PCI Express Mini Card slot														
Intel 1000	11b/g/n wireless ¹³ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2														
Bluetooth™	Some: Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator														
Ethernet	One gigabit ethernet port, Intel 82578DM														
Audio	High Definition (HD) Audio, Realtek® ALC269 codec														
Speaker	Two internal speakers (2watt x 2)														
IEEE 1394	None														
Intel AMT	vPro model(s): Intel Active Management Technology 6.0 (Intel AMT 6.0)														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified														
Preloaded operating system²⁰					Accessories										
- Some: Genuine Windows® 7 Professional 32					2GB PC3-10600 DDR3 SODIMM 55Y3710										
- Some: Genuine Windows 7 Professional 64					ThinkCentre M90z Height Adjustable Stand 57Y4351										
					More accessories on O-M90Z sheet										
Preloaded applications⁵ (all OSes; only some listed)					Acc Guide in pdf lenovo.com/accessoriesguide										
• Rescue and Recovery™					Other accessories at lenovo.com/accessories										
• ThinkVantage System Update															
• Corel® Burn.Now™ (DVD±RW)															
• Corel DVD MovieFactory® (DVD±RW)															
<ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378															

See footnotes for important warranty information

☞ US model announced Dec 13, 2011; previous models on May 11, Nov 30, 2010, Jan 4, or Nov 8, 2011
 ☞ US models withdrawn effective April or November 2011

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Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	SATA disk	Chassis intr switch	Bluetooth	Media reader	PCIe Mini Card 802.11	Stand type	Intel vPro	Win7 preload	Global Educ	Avail date
✖ 5205-A5U	i3-530	2.93	2GBx1	23.0" Full HD		320GB ²					Frame		Pro 32	None	Jun 10
✖ 5205-H3U	i3-550	3.20	2GBx1	23.0" Full HD	2.0M	320GB				Intel 1000	Frame		Pro 32	None	Mar 11
✖ 5205-B1U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	320GB	Switch	Blue	Media	Intel 1000	Lift	vPro	Pro 32	None	Jun 10
✖ 5205-B2U	i5-670	3.46	2GBx1	23.0" Full HD	2.0M	320GB	Switch	Blue	Media	Intel 1000	Lift	vPro	Pro 32	None	Jun 10
5205-A6U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	500GB				Intel 1000	Frame	vPro	Pro 64	None	Jun 10
• Best space saving solution & excellent cable management • These models have a 3-year limited warranty¹ • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	All-In-One PC for the enterprise Intel® Core™ i3 Processor i3-530 or i3-550 with dual-core , Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or Intel Core i5 Processor i5-650 or i5-670 with dual-core , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket									All-In-One All: • Business black color • Handle in rear • Support VESA mount (100mm) • Tool-less back cover, disk, optical drive, memory removal Model(s) with Frame stand: • 22" W X 4.29" D X 17.4" H • 560mm W X 109mm D X 443mm H • 23.6 lb (10.7 kg) in maximum configuration Model(s) with Lift stand: • Height Adjustable • 22" W X 9.84" D X 17.4" H • 560mm W X 250mm D X 443mm H • 29.3 lb (13.3 kg) in maximum configuration • Tilt -5°-25° All: Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)					
Implementation	2GB or 4GB std, 8GB max ⁸ , PC3-10600 1333MHz DDR3 , dual-channel capable, two 204-pin SODIMM sockets (notebook)														
Memory															
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models], 1759MB [4GB model]), one DisplayPort™ connector, supports dual independent display														
DP dongle	None														
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color, anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector														
Multi-touch	None														
Camera	Some: Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical on/off switch									Security • Security chip (see information left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard, mouse • Individual USB port disablement • Some: Chassis intrusion switch					
SATA disk	320GB or 500GB, SATA 3.0Gb/s, 3.5" wide, 7200 rpm														
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high														
eSATA port	None														
Diskette drive	None														
Media reader	Some: Single Slot SD Media Card Reader														
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB														
Ports	Rear: four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector Side: two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) One PCI Express Mini Card slot Some: 11b/g/n wireless ¹³ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Some: Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator One gigabit ethernet port, Intel 82578DM High Definition (HD) Audio, Realtek® ALC269 codec Two internal speakers (2watt x 2)														
PCIe Mini Card	Intel 1000									Supports ThinkVantage® technologies					
Bluetooth™										• EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • TCO Certified Edge • GREENGUARD® certified • RoHS-compliant					
Ethernet															
Audio															
Speaker															
IEEE 1394	None														
Intel AMT	vPro model(s): Intel Active Management Technology 6.0 (Intel AMT 6.0) Non-vPro model(s): None														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant									Limited Warranty ¹ ➤ 3-year parts and labor ➤ International Warranty Service ⁹ ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Onsite service upgrade options (in eligible locations): ⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ➤ ThinkPlus services at lenovo.com/thinkplus/warranty ➤ Post warranty maintenance services available ➤ 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified														
Preloaded operating system ²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64 Preloaded applications ⁵ (all OSes; only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo Message Center Plus • Norton™ Internet Security 2011 (30 days of virus definitions) • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® DVD MovieFactory® (DVD±RW)					Accessories 2GB PC3-10600 DDR3 SODIMM 55Y3710 ThinkCentre M90z Height Adjustable Stand 57Y4351 More accessories on O-M90Z sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories										

See footnotes for important warranty information

✖ US model announced February 8, 2011; previous models on May 11, 2010

✖ US models withdrawn effective April or November 2011

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	SATA disk	Chassis intr switch	Blue-tooth	PCIe Mini Card 802.11	Media reader	Stand type	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
2471-A1U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	320GB ²	Switch	None	None	Media	Lift	vPro	Pro 32	G P	Jul 10
<ul style="list-style-type: none">• Best space saving solution & excellent cable management• This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ Processor i5-650 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket								All-In-One <i>All:</i> <ul style="list-style-type: none">• Business black color• Handle in rear• Support VESA mount (100mm)• Tool-less back cover, disk, optical drive, memory removal						
Implementation									<i>Model(s) with Lift stand:</i> <ul style="list-style-type: none">• Height Adjustable• 22" W X 9.84" D X 17.4" H• 560mm W X 250mm D X 443mm H• 29.3 lb (13.3 kg) in maximum configuration• Tilt -5°-25°						
Memory	2GB std, 8GB max ⁸ , PC3-10600 1333MHz DDR3 , dual-channel capable, two 204-pin SODIMM sockets (notebook)								Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)						
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one DisplayPort™ connector, supports dual independent display								Security <ul style="list-style-type: none">• Security chip (see information left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard, mouse• Individual USB port disablement• Chassis intrusion switch						
DP dongle	None														
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical switch on/off														
SATA disk	320GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm														
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high														
eSATA port	None														
Diskette drive	None														
Media reader	Single Slot SD Media Card Reader														
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB								Supports ThinkVantage® technologies <ul style="list-style-type: none">• EPEAT™ Gold rating• ENERGY STAR® 5.0-compliant• TCO Certified Edge• GREENGUARD® certified• RoHS-compliant Limited Warranty¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ International Warranty Service⁹➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378						
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express Mini Card slot														
Intel 1000	None														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Intel 82578DM														
Audio	High Definition (HD) Audio, Realtek® ALC269 codec														
Speaker	Two internal speakers (2watt x 2)														
IEEE 1394	None														
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo								55Y3710						
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified														
Preloaded operating system²⁰ - Genuine Windows® 7 Professional 32				Accessories 2GB PC3-10600 DDR3 SODIMM More accessories on O-M90Z sheet											
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo Message Center Plus• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories											

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Integrated graphics	SATA disk	SATA optical	PCle Mini Card 802.11	Media reader	Intel vPro	Win7 preload	Global Educ	Avail date
✂ 0870-A3U	i3-530	2.93	2GBx1	23.0" Full HD	2.0M	Intel HD	320GB ²	DVD±RW	Intel 1000			Pro 32	None	Jun 10
0870-A4U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Media	vPro	Pro 32	None	Jun 10
☞ 0870-A6U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000		vPro	Pro 64	None	Dec 10
<ul style="list-style-type: none">• Best space saving solution & excellent cable management• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ i3 Processor i3-530 with dual-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i5 Processor i5-650 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket							All-In-One <ul style="list-style-type: none">• Business black color• 22" W X 4.57" D X 17.4" H• 560mm W X 116mm D X 443mm H• 25.3 lb (11.5 kg) in maximum configuration• Handle in rear• Support VESA mount (100mm)• Tool-less back cover, disk, optical drive, memory removal• Frame stand						
Implementation								Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)						
Memory	2GB or 4GB std, 8GB max ⁸ , PC3-10600 1333MHz DDR3 , dual-channel capable, two 204-pin SODIMM sockets (notebook)													
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one DisplayPort™ connector, supports dual independent display													
DP dongle	None													
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector													
Multi-touch	Supports Multi-touch function													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical switch on/off													
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm													
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high													
eSATA port	None													
Diskette drive	None													
Media reader	Some: Single Slot SD Media Card Reader													
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB													
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express Mini Card slot													
Intel 1000	11b/g/n wireless ¹³ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2													
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Intel 82578DM													
Audio	High Definition (HD) Audio, Realtek® ALC269 codec													
Speaker	Two internal speakers (2watt x 2)													
IEEE 1394	None													
Intel AMT	<i>vPro model(s):</i> Intel Active Management Technology 6.0 (Intel AMT 6.0) <i>Non-vPro model(s):</i> None													
Modem	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64					Accessories 2GB PC3-10600 DDR3 SODIMM 55Y3710 More accessories on O-M90Z sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories									
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo Message Center Plus• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)														
														
Security <ul style="list-style-type: none">• Security chip (see information left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard, mouse• Individual USB port disablement														
Supports ThinkVantage® technologies														
<ul style="list-style-type: none">• EPEAT™ Gold rating• ENERGY STAR® 5.0-compliant• TCO Certified Edge• GREENGUARD® certified• RoHS-compliant														
Limited Warranty¹ <ul style="list-style-type: none">☞ 3-year parts and labor☞ International Warranty Service⁹☞ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)☞ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)☞ ThinkPlus services at lenovo.com/thinkplus/warranty☞ Post warranty maintenance services available☞ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378														



Security

- Security chip (see information left)
- Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)
- Boot sequence control
- Boot without keyboard, mouse
- Individual USB port disablement

Supports ThinkVantage® technologies

- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- TCO Certified Edge
- GREENGUARD® certified
- RoHS-compliant


Limited Warranty¹

- ☞ **3-year parts and labor**
- ☞ **International Warranty Service⁹**
- ☞ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ☞ **Onsite service upgrade options (in eligible locations):⁷**
 - **3-year LOR 9x5, 4 hour response** (ThinkPlus™ part number 41C9192)
 - **3-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9193)
 - **4-year LOR 9x5, Next Business Day** (ThinkPlus part number 41C9194)
 - **4-year LOR 9x5, 4 hour response** (ThinkPlus part number 41C9195)
 - **4-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9196)
- ☞ **ThinkPlus services at lenovo.com/thinkplus/warranty**
- ☞ **Post warranty maintenance services available**
- ☞ **24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378**

See footnotes for important warranty information

☞ US model announced November 30, 2010; previous models on May 11, 2010


✖ US model withdrawn effective April 2011

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Integrated graphics	SATA disk	Chassis intr switch	Blue- tooth	PCIe Mini Card 802.11	Media reader	Intel vPro	Win7 preload	Global Educ	Avail date
0800-A2U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD 500GB ²				Intel 1000	Media	vPro	Pro 32	None	Jun 10
0800-A5U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	Intel HD 320GB		Switch	Blue	Intel 1000	Media	vPro	Pro 32	None	Jun 10
0800-A6U	i5-670	3.46	2GBx1	23.0" Full HD	2.0M	Intel HD 320GB		Switch	Blue	Intel 1000	Media	vPro	Pro 32	None	Jun 10
0800-D4U	i3-530	2.93	2GBx1	23.0" Full HD	2.0M	Intel HD 320GB				Intel 1000			Pro 32	None	Jun 10
<ul style="list-style-type: none">• Best space saving solution & excellent cable management• These models have a 3-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ i3 Processor i3-530 with dual-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or Intel Core i5 Processor i5-650 or i5-670 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket								All-In-One <ul style="list-style-type: none">• Business black color• 22" W X 4.57" D X 17.4" H• 560mm W X 116mm D X 443mm H• 25.3 lb (11.5 kg) in maximum configuration• Handle in rear• Support VESA mount (100mm)• Tool-less back cover, disk, optical drive, memory removal• Frame stand						
Implementation															
Memory	2GB or 4GB std, 8GB max ⁸ , PC3-10600 1333MHz DDR3 , dual-channel capable, two 204-pin SODIMM sockets (notebook)								Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)						
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models], 1759MB [4GB model]), one DisplayPort™ connector, supports dual independent display														
DP dongle	None														
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector														
Multi-touch Camera	Supports Multi-touch function Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical on/off switch														
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm								Security <ul style="list-style-type: none">• Security chip (see information left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard, mouse• Individual USB port disablement• Some: Chassis intrusion switch						
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high														
eSATA port	None														
Diskette drive	None														
Media reader	Some: Single Slot SD Media Card Reader								Supports ThinkVantage® technologies						
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB								• EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • TCO Certified Edge • GREENGUARD® certified • RoHS-compliant						
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)								Limited Warranty¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378						
PCIe Mini Card	One PCI Express Mini Card slot														
Intel 1000	11b/g/n wireless ¹³ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2														
Bluetooth™	Some: Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator														
Ethernet	One gigabit ethernet port, Intel 82578DM														
Audio	High Definition (HD) Audio, Realtek® ALC269 codec														
Speaker	Two internal speakers (2watt x 2)														
IEEE 1394	None														
Intel AMT	<i>vPro model(s):</i> Intel Active Management Technology 6.0 (Intel AMT 6.0) <i>Non-vPro model(s):</i> None														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified														
Preloaded operating system²⁰ - Genuine Windows® 7 Professional 32				Accessories 2GB PC3-10600 DDR3 SODIMM 55Y3710 More accessories on O-M90Z sheet											
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo Message Center Plus• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories											

See footnotes for important warranty information

US models announced May 11, 2010

⚡ US models withdrawn effective April or November 2011

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	SATA disk	Chassis intr switch	Blue-tooth	PCIe Mini Card 802.11	Media reader	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
0852-A1U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	320GB ²	Switch	None	None	Media	vPro	Pro 32	G P	Jul 10
<ul style="list-style-type: none">• Best space saving solution & excellent cable management• This model is part of the Global Models Plus (GMP) program with limited onsite service³ 3-year limited warranty• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ i5 Processor i5-650 with dual-core , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket									All-In-One <ul style="list-style-type: none">• Business black color• 22" W X 4.57" D X 17.4" H• 560mm W X 116mm D X 443mm H• 25.3 lb (11.5 kg) in maximum configuration• Handle in rear• Support VESA mount (100mm)• Tool-less back cover, disk, optical drive, memory removal• Frame stand				
Implementation	2GB std, 8GB max ⁸ , PC3-10600 1333MHz DDR3 , dual-channel capable, two 204-pin SODIMM sockets (notebook)									Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)				
Memory	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one DisplayPort™ connector, supports dual independent display													
Graphics	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector Supports Multi-touch function													
DP dongle	None													
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector Supports Multi-touch function													
Multi-touch	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical switch on/off									Security <ul style="list-style-type: none">• Security chip (see information left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)• Boot sequence control• Boot without keyboard, mouse• Individual USB port disablement• Chassis intrusion switch				
Camera														
SATA disk	320GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm													
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high													
eSATA port	None													
Diskette drive	None									Supports ThinkVantage® technologies <ul style="list-style-type: none">• EPEAT™ Gold rating• ENERGY STAR® 5.0-compliant• TCO Certified Edge• GREENGUARD® certified• RoHS-compliant				
Media reader	Single Slot SD Media Card Reader													
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB													
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) One PCI Express Mini Card slot													
PCIe Mini Card	None													
Intel 1000	None									Limited Warranty¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ International Warranty Service⁹➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)➤ ThinkPlus services at lenovo.com/thinkplus/warranty➤ Post warranty maintenance services available➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378				
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Intel 82578DM													
Audio	High Definition (HD) Audio, Realtek® ALC269 codec													
Speaker	Two internal speakers (2watt x 2)													
IEEE 1394	None									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 32				
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)													
Modem	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo									Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Lenovo Message Center Plus• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
Preloaded operating system²⁰			Accessories			55Y3710								
- Genuine Windows® 7 Professional 32			2GB PC3-10600 DDR3 SODIMM			More accessories on O-M90Z sheet								
			More accessories on O-M90Z sheet			Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories								

Memory

2GB PC3-10600 DDR3 SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 SODIMM	55Y3711	ann 03/02/10

More information at

www.lenovo.com/support/desktopmemorycompatibility

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann 03/31/09
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Keyboard

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

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

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

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

Multimedia

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

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Stand

ThinkCentre M90z Height Adjustable Stand ⁵⁹	57Y4351	ann 05/04/10
ThinkCentre Extend Arm ⁵⁷	57Y4352	ann 07/06/10

⁵⁷ Compatible when ThinkCentre Extend Arm is desk (clamp) mounted only, wall mount is not supported.

⁵⁹ Not compatible to Multi-touch models.

Monitors

ThinkVision® L1711p 17" (VGA, DVI-D) ⁶⁸	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D) ⁶⁸	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11

⁶⁸ Requires a DisplayPort Monitor Cable (DisplayPort to Single-Link DVI-D or DisplayPort to VGA Analog).

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort P Monitor Cable (0A36537).

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

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

Lenovo ThinkCentre M91p Small and Tower

ThinkCentre®



Lenovo ThinkCentre M91p
Small and Tower



Lenovo ThinkCentre M91p Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M91p Small



Lenovo ThinkCentre M91p Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M91p Tower



Lenovo ThinkCentre M91p Tower

ThinkCentre® M91 Eco Ultra Small (7519) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7519-B3U	1x2	Core i3-2130	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	None	N N	Pro 64	12/13/11

- The most powerful, stable, and manageable desktop with next generation Intel platform
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 1-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Ultimate security, stability, and manageability for the enterprise													Preloaded operating system									
Processor	Intel® Core™ i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller																		Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket																		Preloaded applications (only some listed)				
Memory	8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)																		<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>																						
DP dongle	None																						
Disk	SATA 6.0Gb/s 7200 rpm																						
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																						
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1																						
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar																						
eSATA port	None																						
Media reader	None																						
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O																						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																						
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort																						
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																						
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																						
Speaker	Internal speaker for business audio																						
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®																						
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)																						
Modem	None																						
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																						
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo® logo																						
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo																						
Floor Stand	System floor stand for vertical orientation																						
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU																						
Machine	<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 79mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal																						
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk																						
Slot	Slot 1: Low Profile, 32-bit PCI 2.3																						
<div><div>optical</div><div>disk</div><div>□ ○ □</div></div>																							
Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement																							
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant																							
Supports ThinkVantage Technologies																							
For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet																							
Limited Warranty	1-year, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available																						

See footnotes for important warranty information
US model announced December 13, 2011

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(MAST1-20) December 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7516-C5U	1x2	Core i3-2100	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	None	G P	Pro 64
7516-E2U	1x2	Core i3-2120	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	None	G P	Pro 64

- The most powerful, stable, and manageable desktop with next generation Intel platform
- These models are part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket												Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)											
Implementation	Processor in LGA1155 socket																							
Memory	8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)																							
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>																							
DP dongle	None																							
Disk	SATA 6.0Gb/s 7200 rpm																							
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																							
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1																							
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar																							
eSATA port	None																							
Media reader	None																							
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O																							
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																							
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort																							
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																							
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																							
Speaker	Internal speaker for business audio																							
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®																							
Intel AMT	None																							
Modem	None																							
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																							
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																							
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo																							
Floor Stand	System floor stand for vertical orientation																							
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU																							
Machine	<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 79mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal																							
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk																							
Slot	Slot 1: Low Profile, 32-bit PCI 2.3																							
<div><div>optical</div><div>disk</div><div>□ ○ □</div></div>																								
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available																							

See footnotes for important warranty information

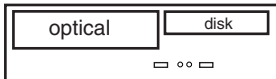
US model announced December 6, 2011; previous model on April 12, 2011

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(MAST1-11) December 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
0266-B7U	1x2	Core i5-2400S	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64
0266-B8U	1x2	Core i5-2500S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i> None			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo® logo			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			
Floor Stand	None			
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 79mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk			
Slot	Slot 1: Low Profile, 32-bit PCI 2.3			
				
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

ThinkCentre® M91p Eco Ultra Small (0266) - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
0266-D1U	1x2	Core i5-2400S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		<div>Preloaded operating system</div> <div>Genuine Windows® 7 Professional 64</div> <div>Preloaded applications (only some listed)</div> <div><ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)</div>
Implementation			
Memory	8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	None		
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU		
Machine	<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 79mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk		
Slot	Slot 1: Low Profile, 32-bit PCI 2.3		
<div><div><div>optical</div><div>disk</div></div><div><div></div><div></div><div></div></div></div>			
<div>Security</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement</div>			
<div>EPEAT™ Gold rating</div> <div>ENERGY STAR® 5.0-compliant</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div>			
<div>Supports ThinkVantage Technologies</div>			
<div>For compatible accessories, please go to O-M91P sheet;</div> <div>For ThinkPlus™ service upgrade options, please go to S-TC sheet</div>			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
0266-D3U	1x2	Core i5-2500S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller	
Implementation	Processor in LGA1155 socket	
Memory	8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>	
DP dongle	None	
Disk	SATA 6.0Gb/s 7200 rpm	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1	
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar	
eSATA port	None	
Media reader	None	
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®	
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)	
Modem	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo	
Floor Stand	System floor stand for vertical orientation	
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU	
Machine	<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 79mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal	
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk	
Slot	Slot 1: Low Profile, 32-bit PCI 2.3	
<div><div>optical</div><div>disk</div><div>○ ○ ○</div></div>		
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	

Preloaded operating system Genuine Windows® 7 Professional 64	
Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement	
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
Supports ThinkVantage Technologies	
For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

Preloaded operating system

Genuine Windows® 7 Professional 64

Preloaded applications²⁰ (only some listed)

- Rescue and Recovery™
- ThinkVantage® System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Microsoft® Office 2010 preloaded; purchase product key to activate
- Corel® Burn.Now™ (DVD±RW)
- Corel DVD MovieFactory® (DVD±RW)

Security

- Security chip (see information on left)
- Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement

 EPEAT™ Gold rating
 ENERGY STAR® 5.0-compliant
 GREENGUARD® certified
 RoHS-compliant

Supports ThinkVantage Technologies

 For compatible accessories, please go to O-M91P sheet;
 For ThinkPlus™ service upgrade options, please go to S-TC sheet

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
5067-A1U	1x2	Core i5-2400S	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	G P	Pro 32

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 32 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)
Implementation	Processor in LGA1155 socket		
Memory	8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		<div><div>optical</div><div>disk</div><div>□ ○ □</div></div>
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	None		
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU		
Machine	<ul style="list-style-type: none">• Business black color; metal case• 10.8" W X 9.4" D X 3.1" H• 275mm W X 238mm D X 79mm H• 9.2 lb (4.2 kg) in maximum configuration• Hinged toolless cover for easy serviceability• Toolless disk and optical drive removal		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk		
Slot	Slot 1: Low Profile, 32-bit PCI 2.3		
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

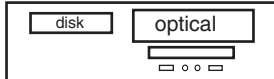
Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
5067-A3U	1x2	Core i5-2400S	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	G P	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Ultimate security, stability, and manageability for the enterprise		<div>Preloaded operating system</div> <div>Genuine Windows® 7 Professional 64</div> <div>Preloaded applications (only some listed)</div> <div><div><div>● Rescue and Recovery™</div><div>● ThinkVantage® System Update</div><div>● ThinkVantage Power Manager</div><div>● ThinkVantage Toolbox</div><div>● Norton™ Internet Security 2011 (30 days of virus definitions)</div><div>● Adobe® Reader®</div><div>● Skype™ for Windows</div><div>● Microsoft® Office 2010 preloaded; purchase product key to activate</div><div>● Corel® Burn.Now™ (DVD±RW)</div><div>● Corel DVD MovieFactory® (DVD±RW)</div></div></div>
Processor	Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, PC3-10600 1333MHz DDR3, two 204-pin SODIMM sockets (notebook)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	None		
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU		
Machine	<div><div>● Business black color; metal case</div><div>● 10.8" W X 9.4" D X 3.1" H</div><div>● 275mm W X 238mm D X 79mm H</div><div>● 9.2 lb (4.2 kg) in maximum configuration</div><div>● Hinged toolless cover for easy serviceability</div><div>● Toolless disk and optical drive removal</div></div>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical		
Slot	Bay 2: 3.5", 1" high, no access, std disk		
	Slot 1: Low Profile, 32-bit PCI 2.3		
	<div><div><div>optical</div><div>disk</div><div><div></div><div></div><div></div></div></div></div>		
Limited Warranty	<div>3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage</div> <div>excluding holidays, next business day response time / service upgrades available</div>		

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4480-A4U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-A5U	4x3	Core i7-2600	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B1U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B3U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B4U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	HD 6450	None	Stand	ES50	vPro	N N	Pro 64
4480-B5U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system	
Processor	Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, VGA) @60Hz; <i>Some:</i> AMD Radeon™ HD 6450 , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 1GB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I) @60Hz; works along with Intel HD Graphics to support four independent monitors			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 13.3" W X 14.5" D X 3.9" H• 337mm W X 369mm D X 99mm H• 16.5 lb (7.5 kg) in maximum configuration• Toolless cover flips up and tilts backward on rear hinges• Toolless disk and optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

US models announced September 6, 2011; previous models on March 1 or August 23, 2011

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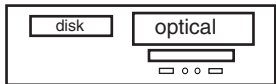
(MAST1-7) September 2011

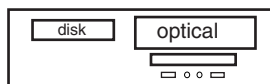
ThinkCentre® M91p Small (4480) - TopSeller - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload	Ann date (mm/dd/yy)
4480-B6U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 32	11/08/11
4480-B7U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 32	11/08/11
4480-B8U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	HD 5450	Switch	Stand	ES50	vPro	N N	Pro 64	11/08/11
4480-B9U	4x3	Core i5-2400	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64	12/13/11
4480-C1U	4x3	Core i5-2500	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64	12/13/11

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache) , Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system ²⁰ Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) ● Rescue and Recovery™ ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW)	
Implementation				
Memory	16GB max ⁷ , UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Some: Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz; Some: AMD Radeon™ HD 5450 , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; Maximum resolution: 2560x1600 (DisplayPort, DVI-I) @60Hz; 2048x1536@85Hz (VGA via DIV-to-VGA dongle); works along with Intel HD Graphics to support four independent monitors			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, 85% PSU			
Machine	● Business black color; metal case ● 13.3" W X 14.5" D X 3.9" H ● 337mm W X 369mm D X 99mm H ● 16.5 lb (7.5 kg) in maximum configuration ● Toolless cover flips up and tilts backward on rear hinges ● Toolless disk and optical drive removal ● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader			
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3			
Limited Warranty ¹²	3-years, limited onsite service ²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		Security ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) ● Power-on password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement ● Some: Chassis intrusion switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	



See footnotes for important warranty information

US models announced December 13, 2011; previous models on November 8, 2011

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(MAST1-18) December 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4518-D6U	4x3	Core i5-2500	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4518-D7U	4x3	Core i7-2600	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4518-E4U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4518-E5U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	HD 5450	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>										
Processor	Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket										
Implementation	Processor in LGA1155 socket										
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets										
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, VGA) @60Hz; <i>Some:</i> AMD Radeon™ HD 5450 , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I) @60Hz; 2048x1536 @85Hz (VGA via DVI-to-VGA dongle); works along with Intel HD Graphics 2000 to support four independent monitors										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1										
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Floor Stand	System floor stand for vertical orientation										
Power supply	240 watts, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 13.3" W X 14.5" D X 3.9" H • 337mm W X 369mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk and optical drive removal • Toolless adapter retention 										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader										
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3										
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										

Preloaded operating system

 Genuine Windows® 7
 Professional 64

Preloaded applications (only some listed)

- Rescue and Recovery™
- ThinkVantage® System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Microsoft® Office 2010 preloaded; purchase product key to activate
- Corel® Burn.Now™ (DVD±RW)
- Corel DVD MovieFactory® (DVD±RW)

Security

- Security chip (see information on left)
- Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Serial port I/O control
- Individual USB port disablement

 EPEAT™ Gold rating
 ENERGY STAR® 5.0-compliant
 GREENGUARD® certified
 RoHS-compliant

Supports ThinkVantage Technologies

 For compatible accessories,
 please go to O-M91P sheet;
 For ThinkPlus™ service upgrade options,
 please go to S-TC sheet

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7033-A1U	4x3	Core i5-2400	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	G P	Pro 32

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Ultimate security, stability, and manageability for the enterprise		Preloaded operating system Genuine Windows® 7 Professional 32 Preloaded applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)
Processor	Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
<div><div>disk</div><div>optical</div><div><div></div><div></div><div></div></div></div>			
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement			
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant			
Supports ThinkVantage Technologies			
For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet			

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7033-A2U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	G P	Pro 64

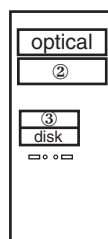
- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)
Implementation	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets		
Memory	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
Graphics	None		
DP dongle	SATA 6.0Gb/s 7200 rpm		
Disk	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
Optical	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA controller	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
SATA cables	None		
eSATA port	None		
Media reader	None		
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none">● Business black color; metal case● 13.3" W X 14.5" D X 3.9" H● 337mm W X 369mm D X 99mm H● 16.5 lb (7.5 kg) in maximum configuration● Toolless cover flips up and tilts backward on rear hinges● Toolless disk and optical drive removal● Toolless adapter retention		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
<div><div>disk</div><div>optical</div></div>			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
Security <ul style="list-style-type: none">● Security chip (see information on left)● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)● Power-on password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement			
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant			
Supports ThinkVantage Technologies			
For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet			

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
7052-A7U	4x4	Core i5-2400	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
7052-A8U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	HD 5450	None	ES50	vPro	N N	Pro 64

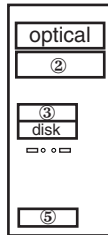
- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							Preloaded operating system				
Processor	Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket							Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none"> • Rescue and Recovery™ • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) 				
Implementation	Processor in LGA1155 socket											
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets											
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, VGA) @60Hz; <i>Some:</i> AMD Radeon™ HD 5450 , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I) @60Hz; 2048x1536@85Hz (VGA via DVI-to-VGA dongle); works along with Intel HD Graphics 2000 to support four independent monitors											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> • Business black color; metal case • 6.9" W X 17.4" D X 16.3" H • 175mm W X 442mm D X 414mm H • 24.2 lb (11.0 kg) in maximum configuration • Handle on top front • Power button on top handle • Toolless cover removal • Tilted front I/O for easy access • Toolless disk, optical drive removal • Toolless adapter retention 											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3											
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											



Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
7052-B2U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
7052-B3U	4x5	Core i7-2600	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
7052-B4U	4x5	Core i5-2500	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 24.2 lb (11.0 kg) in maximum configuration● Handle on top front● Power button on top handle● Toolless cover removal● Tilted front I/O for easy access● Toolless disk, optical drive removal● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty ¹	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information

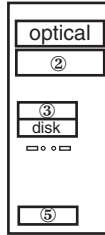
US model announced September 6, 2011; previous models on June 21 or August 23, 2011

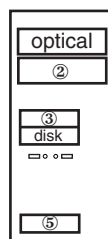
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(MAST1-17) September 2011

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	Media reader	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7052-B5U	4x5	Core i5-2400	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	11/08/11
7052-B6U	4x5	Core i5-2500	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 32	11/08/11
7052-B7U	4x5	Core i7-2600	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 32	11/08/11
7052-B8U	4x5	Core i5-2500	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	HD 5450	Switch	None	ES50	vPro	N N	Pro 64	11/08/11
7052-B9U	4x5	Core i7-2600	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	HD 6450	None	Media	ES50	vPro	N N	Pro 64	11/08/11
7052-C2U	4x5	Core i5-2400	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	12/13/11
7052-C3U	4x5	Core i5-2500	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	12/13/11
7052-C4U	4x5	Core i7-2600	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	12/13/11

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system²⁰ <i>Some:</i> Genuine Windows® 7 Professional 32 <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	16GB max ⁷ , UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, VGA)@60Hz; <i>Some:</i> AMD Radeon™ HD 5450 , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; works along with Intel HD Graphics to support four independent monitors <i>Some:</i> AMD Radeon HD 6450 , PCI Express 2.0 x16 adapter, HDCP, DirectX 11, 1GB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; works along with Intel HD Graphics to support four independent monitors			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	<i>Some:</i> 25-in-1 media reader, internal USB 2.0			
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk		Security <ul style="list-style-type: none">• Security chip (see information on left)• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement• <i>Some:</i> Chassis intrusion switch	
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
Limited Warranty ¹²	3-years, limited onsite service²⁴ , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades ²² available		Supports ThinkVantage Technologies	
			For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	



- Security**
- Security chip (see information on left)
 - Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
 - Power-on password
 - Hard disk password
 - Boot sequence control
 - Boot without keyboard and mouse
 - Serial port I/O control
 - Individual USB port disablement
 - *Some:* Chassis intrusion switch

EPEAT™ Gold rating
 ENERGY STAR® 5.0-compliant
 GREENGUARD® certified
 RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M91P sheet;
 For ThinkPlus™ service upgrade options, please go to S-TC sheet

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4524-A8U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
4524-A2U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 32
4524-C8U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	HD 5450	None	ES50	vPro	N N	Pro 64
4524-E1U	4x4	Core i5-2500	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
4524-E3U	4x4	Core i7-2600	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64

• Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology

• These models have a 3-year limited warranty

• These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation				
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	Some: Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i> Some: AMD Radeon™ HD 5450 , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution: 2560x1600 (DisplayPort, DVI-I) @60Hz;</i> 2048x1536@85Hz (VGA via DVI-to-VGA dongle); works along with Intel HD Graphics 2000 to support four independent monitors			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 24.2 lb (11.0 kg) in maximum configuration● Handle on top front● Power button on top handle● Toolless cover removal● Tilted front I/O for easy access● Toolless disk, optical drive removal● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

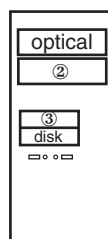
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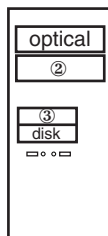
disk

⋮ ⋮



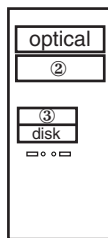
Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7034-A1U	4x4	Core i5-2400	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	G P	Pro 32

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket			Preloaded operating system Genuine Windows® 7 Professional 32		
Implementation	Processor in LGA1155 socket			Preloaded applications (only some listed)		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			<ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe® Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i> None					
DP dongle	None					
Disk	SATA 6.0Gb/s 7200 rpm					
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive					
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1					
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar					
eSATA port	None					
Media reader	None					
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)					
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)					
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec					
Speaker	Internal speaker for business audio					
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®					
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)					
Modem	None					
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo					
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo					
Power supply	280 watts with variable speed fan, autosensing, 85% PSU					
Machine	<ul style="list-style-type: none">● Business black color; metal case● 6.9" W X 17.4" D X 16.3" H● 175mm W X 442mm D X 414mm H● 24.2 lb (11.0 kg) in maximum configuration● Handle on top front● Power button on top handle● Toolless cover removal● Tilted front I/O for easy access● Toolless disk, optical drive removal● Toolless adapter retention					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk					
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3					
						
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available					
Security <ul style="list-style-type: none">● Security chip (see information on left)● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Serial port I/O control● Individual USB port disablement						
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant						
Supports ThinkVantage Technologies						
For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet						

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7034-A2U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	G P	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket			Preloaded operating system Genuine Windows® 7 Professional 64		
Implementation	Processor in LGA1155 socket			Preloaded applications (only some listed)		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage® System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe Reader®• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)		
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>					
DP dongle	None					
Disk	SATA 6.0Gb/s 7200 rpm					
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive					
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1					
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar					
eSATA port	None					
Media reader	None					
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)					
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)					
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec					
Speaker	Internal speaker for business audio					
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®					
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)					
Modem	None					
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo					
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo					
Power supply	280 watts with variable speed fan, autosensing, 85% PSU					
Machine	<ul style="list-style-type: none">• Business black color; metal case• 6.9" W X 17.4" D X 16.3" H• 175mm W X 442mm D X 414mm H• 24.2 lb (11.0 kg) in maximum configuration• Handle on top front• Power button on top handle• Toolless cover removal• Tilted front I/O for easy access• Toolless disk, optical drive removal• Toolless adapter retention					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk					
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3					
						
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available					
Security <ul style="list-style-type: none">• Security chip (see information on left)• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® MicroSaver® cable)• Power-on password• Hard disk password• Boot sequence control• Boot without keyboard and mouse• Serial port I/O control• Individual USB port disablement						
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant						
Supports ThinkVantage Technologies						
For compatible accessories, please go to O-M91P sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet						

Memory*Eco Ultra Small 0266/5067/7516 use notebook memory:*

2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

*Small 4518/4480/7033, and**Tower 4524/7052/7034 use desktop memory:*

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical***All:*

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

Tower 4524/7052/7034 support:

Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann 03/31/09
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Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann 03/31/09

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Graphics*Small 4518/4480/7033 support Low Profile:*

NVIDIA® Quadro® 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles) ⁶⁷	0A36528	ann 04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI with a DVI to VGA converter) ⁶⁷	0A36535	ann 06/28/11
NVIDIA Quadro 1GB 600 (DP, DVI with a DVI to VGA converter) ⁶⁷	0A36183	ann 10/26/10
NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) ⁶⁷	57Y4167	ann 03/02/10

Tower 4524/7052/7034 support 75 watts max:

NVIDIA Quadro 512MB NVS 300 DMS59 ⁶⁷	0A36528	ann 04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI) ⁶⁷	0A36535	ann 06/28/11
NVIDIA Quadro 1GB 600 (DP, DVI) ⁶⁷	0A36183	ann 10/26/10
NVIDIA GeForce 310 512MB DMS59 ⁶⁷	57Y4167	ann 03/02/10

⁶⁷ Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Headphone P550	55Y2065	

⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Security**

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶***Eco Ultra Small 0266/5067 support:*

Lenovo Vertical PC and Monitor Stand II	41R4474	ann 01/27/09
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All:

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre Edge 71 Small and
Lenovo ThinkCentre Edge 71 Tower



Lenovo ThinkCentre Edge 71 Tower
with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre Edge 71 Small



Lenovo ThinkCentre Edge 71 Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre Edge 71 Tower



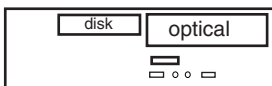
Lenovo ThinkCentre Edge 71 Tower

ThinkCentre® Edge 71 Small (1578) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Parallel port	Serial port	Floor stand	Global Educ	Win7 prelad
1578-B1U	3x3	Pentium G620	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64
1578-B2U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64
1578-B4U	3x3	Pentium G620	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Serial	Stand	N N	Pro 64
1578-H3U	3x3	Core i3-2120	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64
1578-G2U	3x3	Celeron G530	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	Media	Parallel	Serial	Stand	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	Some: 11-in-1 media reader, internal USB 2.0			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	180 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 13.1" W X 14.5" D X 3.8" H● 333mm W X 368mm D X 97mm H● 14.3 lb (6.5 kg) in maximum configuration● Ergonomic rubberized handle● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-Edge71 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

US model announced September 6, 2011; previous models on July 5 or August 23, 2011

US models withdrawn effective December 2011

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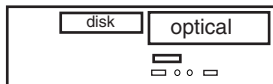
(TAIP1-1) September 2011

ThinkCentre® Edge 71 Small (1578) - TopSeller - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Media reader	Parallel port	Serial port	Floor stand	Global Educ	Win7 preload	Ann date (mm/dd/yy)
1578-L4U	3x3	Core i5-2500S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64	11/08/11
1578-L6U	3x3	Pentium G630	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	None	Stand	N N	Pro 64	11/08/11
1578-L7U	3x3	Core i3-2130	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	None	Stand	N N	Pro 64	11/08/11
1578-L5U	3x3	Pentium G630	2GBx2 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	None	Stand	N N	Pro 64	11/08/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Pentium® G630 Processor (2 cores / 2 threads , 2.7GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2130 Processor (2 cores / 4 threads , 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500S Processor (4 cores / 4 threads , 2.7GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	180 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 13.1" W X 14.5" D X 3.8" H● 333mm W X 368mm D X 97mm H● 14.3 lb (6.5 kg) in maximum configuration● Ergonomic rubberized handle● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
				
Limited Warranty ¹	1-year, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-Edge71 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information
 US models announced November 8, 2011

✗ US models withdrawn effective December 2011

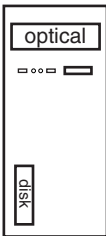
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 (TAIP1-3) November 2011

ThinkCentre® Edge 71 Tower (1577) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Parallel port	Serial port	Global Educ	Win7 prelad
✂ 1577-B4U	3x3	Pentium G620	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64
✂ 1577-B5U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64
1577-B9U	3x3	Pentium G620	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	Serial	N N	Pro 64
1577-K8U	3x3	Core i3-2120	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64
1577-J7U	3x3	Celeron G530	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache) , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	180 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 6.3" W X 14.0" D X 15.4" H● 160mm W X 355mm D X 392mm H● 15.4 lb (7.0 kg) in maximum configuration● Ergonomic rubberized handle● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (45w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement	
			RoHS-compliant	
			Supports ThinkVantage Technologies	
			For compatible accessories, please go to O-Edge71 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information

✂ US model announced September 6, 2011; previous models on July 5 or August 23, 2011

✂ US models withdrawn effective December 2011

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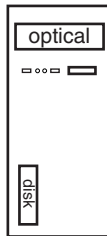
(TAIP1-2) September 2011

ThinkCentre® Edge 71 Tower (1577) - TopSeller - II

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Parallel port	Serial port	Global Educ	Win7 preload	Ann date (mm/dd/yy)
1577-M5U	3x3	Core i5-2500S	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64	11/08/11
1577-M6U	3x3	Pentium G630	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	None	N N	Pro 64	11/08/11
1577-M7U	3x3	Core i3-2130	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	None	N N	Pro 64	11/08/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Stylish design, reliability, and productivity for small/medium businesses Intel® Pentium® G630 Processor (2 cores / 2 threads , 2.7GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2130 Processor (2 cores / 4 threads , 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500S Processor (4 cores / 4 threads , 2.7GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Live● Microsoft Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, UDIMM, PC3-10600 1333MHz DDR3 , two 240-pin DIMM sockets			
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	180 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">● Glossy black bezel; metal case● 6.3" W X 14.0" D X 15.4" H● 160mm W X 355mm D X 392mm H● 15.4 lb (7.0 kg) in maximum configuration● Ergonomic rubberized handle● Highlighted optical drive button for easy access			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed			
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (45w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1			
				
Security <ul style="list-style-type: none">● One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">-Padlock loop (in rear for opt padlock)-Security slot (in rear for optional Kensington® MicroSaver® cable)● Power-on password● Administrator password● Hard disk password● Boot sequence control● Boot without keyboard and mouse● Individual USB port disablement				
RoHS-compliant				
Supports ThinkVantage Technologies				
For compatible accessories, please go to O-Edge71 sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet				
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information
 US models announced November 8, 2011

✗ US models withdrawn effective December 2011

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 (TAIP1-4) November 2011

Memory

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Graphics*Small 1578 support Low Profile:*

NVIDIA® GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10
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Tower 1577 support:

NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10
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Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Ultrastim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	ann 12/08/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09
Lenovo Cherry Smartcard Keyboard	0A36328	

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Speaker M0520 (black)	57Y6360	ann 02/08/11
Lenovo Speaker M0520 (red)	57Y6361	ann 02/08/11
Lenovo Headphone P550	55Y2065	

⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Security**

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann 11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)	4420MB2	ann 09/13/11

More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre Edge 91z All-In-One
(Wireless Keyboard & mouse on selected models only)



Lenovo ThinkCentre Edge 91z All-In-One



Lenovo ThinkCentre Edge 91z All-In-One



Handle



Lenovo ThinkCentre Edge 91z All-In-One



Lenovo ThinkCentre Edge 91z with Stand
(ThinkCentre Edge 91z Stand 0A33969)

Type-model	Processor	Memory ⁸	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	mSATA SSD	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Stand type	Keyboard /Mouse	Global	Win7 preload
7075-G1U	i3-2100	2GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Prem 64
7075-H1U	i3-2100	4GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	None	Frame	Edge USB	None	Pro 64
7075-G4U	i5-2400S	4GBx1	21.5" Full HD	2.0M	500G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64
7075-G8U	i7-2600S	4GBx2	21.5" Full HD	2.0M	1TB 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64
7075-L1U	i3-2120	4GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64
7075-L2U	G850	4GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64

- **Best space saving solution & excellent cable management**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty**
- **These systems are Microsoft Office 2010 Product Key Ready (O10PKR)**

Positioning	Stylish All-In-One PC for small/medium businesses										Preloaded operating system							
Processor	Intel® Pentium® G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600S Processor (4 cores / 8 threads, 2.8GHz, 8MB cache), Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket										Some: Genuine Windows® 7 Professional 64 Some: Genuine Windows 7 Home Premium 64 Preloaded applications ²⁰ (only some listed) <ul style="list-style-type: none">● Rescue and Recovery™● ThinkVantage® System Update● ThinkVantage Power Manager● ThinkVantage Toolbox● Norton™ Internet Security 2011 (30 days of virus definitions)● Adobe Reader®● Skype™ for Windows● Microsoft® Office 2010 preloaded; purchase product key to activate● Corel® Burn.Now™ (DVD±RW)● Corel DVD MovieFactory® (DVD±RW)● Corel WinDVD (DVD±RW)							
Implementation	Processor in LGA1155 socket																	
Memory	8GB max, PC3-10600 1333MHz DDR3, two 204-pin SODIMM sockets (notebook)																	
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via HDMI, supports dual independent display																	
Widescreen display	21.5" (545.2mm) Full HD 1080p (1920x1080) TFT color, infinity display, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; works as standalone monitor via VGA-in connector																	
Multi-touch	None																	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator																	
Controls	Front facing buttons for brightness up/auto, brightness down, power on/off, and Video in																	
Disk	SATA 6.0Gb/s, 3.5" Wide, 7200 rpm																	
mSATA™ SSD	None																	
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable																	
eSATA port	None																	
Media reader	Some: 7-in-1 media reader, internal USB 2.0																	
Chipset	Intel B65 Express Chipset																	
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI, VGA-in connector																	
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																	
PCIe Mini Card	Two PCI Express® Mini Card slots																	
PCIe WLAN	11b/g/n wireless, Mini PCIe adapter, Intel Condor Peak 1000, 1x2																	
Bluetooth	None																	
Ethernet	One gigabit ethernet port, Intel 82579LM																	
Audio	High Definition (HD) Audio, Realtek® ALC269Q																	
Speaker	Two internal stereo speakers (2x2w) with amplifier																	
Intel AMT	None																	
Modem	None																	
IEEE 1394	None																	
Security chip	None																	
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo														Security <ul style="list-style-type: none">● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)● Boot sequence control● Boot without keyboard and mouse● USB port disablement			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														Climate Saver-compliant			
Power supply	150 watts AC adapter, autosensing, 85% PSU														ENERGY STAR® 5.0-compliant			
Machine	Model(s) with Frame stand: <ul style="list-style-type: none">● Business black color● 21.5" W X 3.2" D X 16.3" H● 545mm W X 81mm D X 414mm H (with feet)● 18.5 lb (8.4 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet										GREENGUARD® certified							
Limited Warranty ¹	1-year, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										RoHS-compliant							
											Supports ThinkVantage Technologies							
											For compatible accessories, please go to O-Edge91Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet							

See footnotes for important warranty information

US models announced November 8, 2011; previous models on May 17, May 24, June 7, or May 21, 2011

US models withdrawn effective November or December 2011

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(TAHO1-1) November 2011

ThinkCentre® Edge 91z (1732) - Multi-touch (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory ^a	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	mSATA SSD	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Stand type	Keyboard /Mouse	Global	Win7 preload	Ann date (mm/dd/yy)
1732-B3U	i5-2500S	4GBx1	21.5" Full HD	2.0M	500G 7200	80GB	DVD±RW	HD 6650A	Intel 1000	Media	Frame	Wireless	None	Pro 64	12/13/11

- Best space saving solution & excellent cable management
- This small and medium business (SMB) model is part of the US TopSeller Program
- This model has a 1-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Stylish All-In-One PC for small/medium businesses</i> Intel® Core™ i5-2500S Processor (4 cores / 4 threads , 2.7GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications²⁰ (only some listed) ● Rescue and Recovery™ ● Password Manager ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe Reader® ● Skype™ for Windows ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW, Blu-ray™) ● Corel DVD MovieFactory® (DVD±RW) ● Corel WinDVD (DVD, DVD±RW, Blu-ray) ● Ulead DVD MovieFactory (Blu-ray model(s) only)
Implementation			
Memory	8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook)		
Graphics	AMD Radeon™ HD 6650A , 1GB memory, DirectX® 11, PowerPlay™ technology, external digital monitor support via HDMI, supports dual independent display		
Widescreen display	21.5" (545.2mm) Full HD 1080p (1920x1080) TFT color , infinity display, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; works as standalone monitor via VGA-in connector		
Multi-touch	Supports Multi-touch function		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator		
Controls	Front facing buttons for brightness up/auto, brightness down, power on/off, and Video in		
Disk	SATA 6.0Gb/s, 3.5" Wide, 7200 rpm		
mSATA™ SSD	80GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot		
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable		
eSATA port	None		
Media reader	7-in-1 media reader, internal USB 2.0		
Chipset	Intel B65 Express Chipset		
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI, VGA-in connector		
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
PCIe Mini Card	Two PCI Express® Mini Card slots		
PCIe WLAN	11b/g/n wireless, Mini PCIe adapter, Intel Condor Peak 1000, 1x2		
Bluetooth	None		
Ethernet	One gigabit ethernet port, Intel 82579LM		
Audio	High Definition (HD) Audio, Realtek® ALC269Q		
Speaker	Two internal stereo speakers (2x2w) with amplifier		
Intel AMT	None		
Modem	None		
IEEE 1394	None		
Security chip	None		
Keyboard	Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black		
Mouse	Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black		
Power supply	180 watts AC adapter, autosensing, 92% PSU		
Machine	<i>Model(s) with Frame stand:</i> <ul style="list-style-type: none">● Business black color● 21.5" W X 3.2" D X 16.3" H● 545mm W X 81mm D X 414mm H (with feet)● 18.5 lb (8.4 kg) in maximum configuration● Handle in rear● Support VESA mount (100mm)● Removable feet		
Limited Warranty ¹	1-year, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

			Security - Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) - Boot sequence control - Boot without keyboard and mouse - USB port disablement
			Climate Saver-compliant ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
			Supports ThinkVantage Technologies
			For compatible accessories, please go to O-Edge91Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet

See footnotes for important warranty information
US model announced December 13, 2011

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(TAHO1-3) December 2011

Memory

2GB PC3-10600 DDR3 SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 SODIMM	55Y3711	ann 03/02/10

More information at

www.lenovo.com/support/desktopmemorycompatibility

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
USB Numeric Keypad	33L3225	ann 05/01/00
Ultraslim Plus Wireless Keyboard and Mouse ⁵²	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 ⁵²	57Y6336	
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

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

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

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

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speaker M220	55Y2033	ann 01/07/10
Lenovo Headphone P550	55Y2065	

Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Stand

ThinkCentre Edge 91z Stand ⁵⁹	0A33969	ann 07/26/11
ThinkCentre Extend Arm ⁵⁷	57Y4352	ann 07/06/10

⁵⁷ Compatible when ThinkCentre Extend Arm is desk (clamp) mounted only, wall mount is not supported.

⁵⁹ Not compatible to Multi-touch models.

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock ⁵⁶	57Y4303	ann 08/24/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre A70 Small and
Lenovo ThinkCentre A70 Tower



Lenovo ThinkCentre A70 Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre A70 Small



Lenovo ThinkCentre A70 Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre A70 Tower



Lenovo ThinkCentre A70 Small

ThinkCentre® A70 Small (7844) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
A70	7844-D4U	4x2	Celeron E3300	2.50	1MB	2	1GB	320GB ²	DVD	GMA	Pro 32	None	Aug 10
A70	7844-C1U	4x2	Pentium E5500	2.80	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7844-B4U	4x2	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7844-P9U	4x2	Celeron E3400	2.60	1MB	2	2GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7844-P8U	4x2	Pentium E5800	3.20	2MB	2	4GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7844-P7U	4x2	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	DVD±RW	GMA	Pro 64	None	Mar 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Quality, reliability, and security for small/medium businesses Intel® Celeron® Processor E3300 or E3400 with dual-core , 800MHz system bus, and 1MB L2 cache or Intel Pentium® Processor E5500 or E5800 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache			Small <div><div>disk (in rear)</div><div>optical</div></div>				
Implementation	Processor in LGA775 socket			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk				
Memory	1GB, 2GB, or 4GB std. , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available			Slot 1: Low Profile, PCI Express x16 (45w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, PCI Express x1 Slot 4: Low Profile, 32-bit PCI 2.3				
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter			<ul style="list-style-type: none">• Business black color; metal case• 13.1" W X 14.5" D X 3.8" H• 333mm W X 368mm D X 97mm H• 14.3 lb (6.5 kg) in maximum configuration• Highlighted optical drive button for easy access• System floor stand for vertical orientation				
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Boot sequence control• Serial port I/O control• USB port disablement				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7							
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive							
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive							
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar							
eSATA port	None			Supports ThinkVantage® technologies				
Diskette drive	None							
Media reader	None							
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)							
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)							
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)			RoHS-compliant				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)							
Audio	High Definition (HD) Audio, Realtek® ALC662 codec							
Speaker	None							
IEEE 1394	None							
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL			Limited Warranty ¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ International Warranty Service⁹⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)⇒ ThinkPlus services at lenovo.com/thinkplus/warranty⇒ Post warranty maintenance services available⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378				
Intel AMT	None							
Modem	None							
Security chip	None							
Keyboard	Lenovo Slim USB Keyboard (USB connector), black, Lenovo® logo							
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			Preloaded operating system ²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Professional 32- <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ⁵ (all OSeS; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)				
Power supply	180 watts, universal, manual switch							
Accessories			2GB PC3-8500 DDR3 UDIMM 45J5435					
			DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618					
			DisplayPort™ to Single-link DVI-D Cable 45J7915					
			DisplayPort to VGA Monitor Cable 57Y4393					
			ADD2 DVI-D Monitor Connection (HDCP) 43R1985					
			NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397					
			NVIDIA Quadro® 512MB FX 380 LP (DP,DVI) 57Y4396					
			More accessories on O-A70 sheet					
			Acc Guide in pdf lenovo.com/accessoriesguide					
			Other accessories at lenovo.com/accessories					

See footnotes for important warranty information

US models announced February 8, 2011; previous models on August 3, 2010

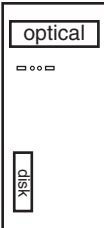
US model withdrawn effective November 2011

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(TIJN1-1) February 2011

ThinkCentre® A70 Tower (7099) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

	Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Graphics	Win7 preload	Global Educ	Avail date	
☞	A70	7099-E6U	4x2	Pentium E5500	2.80	2MB	2	3GB	320GB ²	None	DVD±RW	GMA	Prem 32	None	Aug 10	
☞	A70	7099-C2U	4x2	Celeron E3300	2.50	1MB	2	1GB	320GB	None	DVD	GMA	Pro 32	None	Aug 10	
☞	A70	7099-B8U	4x2	Pentium E5500	2.80	2MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 32	None	Aug 10	
☞	A70	7099-A5U	4x2	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 32	None	Aug 10	
☞	A70	7099-U3U	4x2	Celeron E3400	2.60	1MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 64	None	Mar 11	
☞	A70	7099-E5U	4x2	Pentium E5500	2.80	2MB	2	4GB	500GB	None	DVD±RW	GMA	Pro 64	None	Aug 10	
☞	A70	7099-U2U	4x2	Pentium E5800	3.20	2MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 64	None	Mar 11	
☞	A70	7099-U1U	4x2	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	None	DVD±RW	GMA	Pro 64	None	Mar 11	
<ul style="list-style-type: none">• These small and medium business (SMB) models are part of the US TopSeller™ Program• These models have a 1-year limited warranty¹• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning	Quality, reliability, and security for small/medium businesses									Tower <ul style="list-style-type: none">• Business black color; metal case• 6.3" W X 14.0" D X 15.4" H• 160mm W X 355mm D X 392mm H• 15.4 lb (7.0 kg) in max configuration• Non-slip designed handle on top front• Power button on top handle• Highlighted optical drive button for easy access <div><div>optical</div><div>□□□□</div><div>disk</div></div>						
Processor	Intel® Celeron® Processor E3300 or E3400 with dual-core, 800MHz system bus, and 1MB L2 cache or Intel Pentium® Processor E5500 or E5800 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket															
Implementation																
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max ⁸ , PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 240-pin DIMM sockets; Italics: standard memory in both sockets; no sockets avail; Non-italics: standard memory in one socket; one socket available															
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500), integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter									Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCI Express x16 (45w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, PCI Express x1 Slot 4: half-length, full-height, 32-bit PCI 2.3						
SATA disk	320GB or 500GB, SATA 3.0Gb/s 7200 rpm, vibration dampening									Security <ul style="list-style-type: none">• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none">- Padlock loop (in rear for opt padlock)- Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Boot sequence control• Serial port I/O control• USB port disablement						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7															
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive															
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar															
eSATA port	None															
Diskette drive	None															
Media reader	None															
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Realtek® ALC662 codec															
Speaker	None															
IEEE 1394	None															
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL															
Intel AMT	None															
Modem	None															
Security chip	None															
Keyboard	Lenovo Slim USB Keyboard (USB connector), black, Lenovo® logo															
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo															
Power supply	180 watts, universal, manual switch															
Preloaded operating system²⁰ <ul style="list-style-type: none">- Some: Genuine Windows® 7 Home Premium 32- Some: Genuine Windows 7 Professional 32- Some: Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Power Manager• ThinkVantage Toolbox• Norton™ Internet Security 2011 (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft Office 2010 preloaded; purchase product key to activate• Corel® Burn.Now™ (DVD±RW)• Corel DVD MovieFactory® (DVD±RW)										Accessories <ul style="list-style-type: none">2GB PC3-8500 DDR3 UDIMM 45J5435DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618DisplayPort™ to Single-link DVI-D Cable 45J7915DisplayPort to VGA Monitor Cable 57Y4393ADD2 DVI-D Monitor Connection (HDCP) 43R1985NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397More accessories on O-A70 sheetAcc Guide in pdf lenovo.com/accessoriesguideOther accessories at lenovo.com/accessories						
Limited Warranty¹ <ul style="list-style-type: none">☞ 1-year parts and labor☞ International Warranty Service⁹☞ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)☞ Onsite service upgrade options (in eligible locations):⁷<ul style="list-style-type: none">• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)☞ ThinkPlus services at lenovo.com/thinkplus/warranty☞ Post warranty maintenance services available☞ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																

See footnotes for important warranty information

☞ US models announced February 8, 2011; previous models on August 3, 2010

☞ US models withdrawn effective November 2011

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(TIJN1-2) February 2011

Memory

2GB PC3-8500 DDR3 UDIMM 45J5435 ann 11/18/08

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**DVD-ROM DL SATA 1.5Gb/s 16X-48X Max⁴ 41N5618 ann 09/26/06

Lenovo® Super Multi-Burner SATA Drive 0A65618 ann 08/23/11

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 ann 01/24/06

500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 ann 11/06/07

USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08

USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11

USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11

Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Graphics*Small 7844 support Low Profile:*DisplayPort™ to Single-link DVI-D Cable⁵⁰ 45J7915 ann 08/05/08DisplayPort to VGA Monitor Cable⁵⁰ 57Y4393 ann 08/04/09DisplayPort to DisplayPort Monitor Cable⁵⁰ 0A36537 ann 09/13/11

ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07

NVIDIA® Quadro® 512MB FX 380 LP (DP, DVI with a DVI to VGA converter) 57Y4396 ann 02/02/10

NVIDIA Quadro 1GB 600 (DP, DVI with a DVI to VGA converter) 0A36183 ann 10/26/10

NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 ann 02/02/10

NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) 57Y4167 ann 03/02/10

*Tower 7099 support 75 watts max:*DisplayPort to Single-link DVI-D Cable⁵⁰ 45J7915 ann 08/05/08DisplayPort to VGA Monitor Cable⁵⁰ 57Y4393 ann 08/04/09DisplayPort to DisplayPort Monitor Cable⁵⁰ 0A36537 ann 09/13/11

ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07

NVIDIA Quadro 1GB 600 (DP, DVI) 0A36183 ann 10/26/10

NVIDIA GeForce 310 512MB (DP, VGA) 57Y4397 ann 02/02/10

NVIDIA GeForce 310 512MB DMS59 57Y4167 ann 03/02/10

⁵⁰ Attaches to the ThinkCentre compatible DisplayPort graphic card.More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard 73P5220 ann 06/21/05

Enhanced Performance USB Keyboard 73P2620 ann 03/23/04

Ultraslim Plus Wireless Keyboard and Mouse⁵² 0A34032 ann 04/05/11

ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09

Lenovo USB Fingerprint Keyboard 73P4730 ann 02/22/05

Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03

Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02

Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07

Lenovo Wireless Laser Mouse⁵² 0A36188 ann 12/20/11More information at www.lenovo.com/support/mice**Multimedia**ThinkPad In-Ear Headphones with mic⁶⁰ 57Y4488 ann 01/07/10⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Modem**

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

SecurityKensington® MicroSaver® Cable Lock⁵⁶ 73P2582 ann 12/29/03Kensington Twin Head Cable Lock⁵⁶ 45K1620 ann 09/30/08Lenovo Security Cable Lock⁵⁶ 57Y4303 ann 08/24/10

USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09

ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 ann 11/11/08

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)⁶⁹ 2448MB6 ann 09/13/11

ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 ann 10/20/09

ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 ann 10/20/09

ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)⁶⁹ 2572MB6 ann 09/13/11ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)⁶⁹ 4420MB2 ann 09/13/11⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).More information at www.lenovo.com/support/monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09

ThinkVision Soundbar 45K1263 ann 09/16/08

Kensington MicroSaver Cable Lock⁵⁶ 73P2582 ann 12/29/03Kensington Twin Head Cable Lock⁵⁶ 45K1620 ann 09/30/08Lenovo Security Cable Lock⁵⁶ 57Y4303 ann 08/24/10

ThinkCentre Extend Arm 57Y4352 ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:

<http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml>

<p><u>TopSeller service upgrade options for ThinkCentre M series</u></p> <p><i>ThinkCentre desktop with 1-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i></p> <table> <tr> <td>3-year LOR 9x5 Next Business Day</td> <td>04W8710</td> </tr> <tr> <td>4-year LOR 9x5 Next Business Day</td> <td>04W8711</td> </tr> </table> <p><i>ThinkCentre desktop with 3-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i></p> <table> <tr> <td>4-year LOR 9x5 Next Business Day</td> <td>04W8712</td> </tr> </table>	3-year LOR 9x5 Next Business Day	04W8710	4-year LOR 9x5 Next Business Day	04W8711	4-year LOR 9x5 Next Business Day	04W8712	<p><u>TopSeller Priority Support</u></p> <ul style="list-style-type: none"> • 24x7 support with priority routing and advanced level technicians <p><i>ThinkCentre desktop with 1-year Onsite warranty</i> Add to 3-year warranty coverage - 3-year Priority Support* 04W8721 Add to 4-year warranty coverage - 4-year Priority Support* 04W8722</p> <p><i>ThinkCentre desktop with 3-year Onsite warranty</i> Add to 3-year warranty coverage - 3-year Priority Support* 04W8721 Add to 4-year warranty coverage - 4-year Priority Support* 04W8722</p> <p>* Covered machine must have concurrent warranty coverage.</p>
3-year LOR 9x5 Next Business Day	04W8710						
4-year LOR 9x5 Next Business Day	04W8711						
4-year LOR 9x5 Next Business Day	04W8712						
<p><u>TopSeller service upgrade options for ThinkCentre A series and Edge series</u></p> <p><i>ThinkCentre desktop with 1-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i></p> <table> <tr> <td>3-year LOR 9x5 Next Business Day</td> <td>04W8710</td> </tr> <tr> <td>4-year LOR 9x5 Next Business Day</td> <td>04W8711</td> </tr> </table> <p><i>ThinkCentre desktop with 3-year Onsite warranty</i></p> <table> <tr> <td>4-year LOR 9x5 Next Business Day</td> <td>04W8712</td> </tr> </table>	3-year LOR 9x5 Next Business Day	04W8710	4-year LOR 9x5 Next Business Day	04W8711	4-year LOR 9x5 Next Business Day	04W8712	
3-year LOR 9x5 Next Business Day	04W8710						
4-year LOR 9x5 Next Business Day	04W8711						
4-year LOR 9x5 Next Business Day	04W8712						

**Partial list of Lenovo® ThinkPlus Services⁷
for ThinkCentre desktops**

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

<u>ThinkPlus service upgrade options for ThinkCentre M series</u> <i>ThinkCentre desktop with 1-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i> 1-year LOR 9x5 4-hour response 41C9189 2-year LOR 9x5 Next Business Day 41C9187 2-year LOR 9x5 4-hour response 41C9190 3-year LOR 9x5 Next Business Day 41C9188 3-year LOR 9x5 4-hour response 41C9191 <i>ThinkCentre desktop with 3-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i> 3-year LOR 9x5 4-hour response 41C9192 3-year LOR 24x7 4-hour response 41C9193 4-year LOR 9x5 Next Business Day 41C9194 4-year LOR 9x5 4-hour response 41C9195 4-year LOR 24x7 4-hour response 41C9196	<u>ThinkPlus service upgrade options for ThinkCentre A series and Edge series</u> <i>ThinkCentre desktop with 1-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i> 1-year LOR 9x5 4-hour response 45K5951 2-year LOR 9x5 Next Business Day 45K5949 2-year LOR 9x5 4-hour response 45K5952 3-year LOR 9x5 Next Business Day 45K5950 3-year LOR 9x5 4-hour response 45K5953 <i>ThinkCentre desktop with 3-year Onsite warranty</i> <i>LOR = Lenovo Onsite Repair</i> 3-year LOR 9x5 4-hour response 45K5955 3-year LOR 24x7 4-hour response 45K5956 4-year LOR 9x5 Next Business Day 45K5957 4-year LOR 9x5 4-hour response 45K5958 4-year LOR 24x7 4-hour response 45K5959 5-year LOR 9x5 Next Business Day 45K5963
<u>ThinkPlus Priority Support for enterprise customers</u> <ul style="list-style-type: none"> • 24x7 support with priority routing and advanced level technicians <i>ThinkCentre desktop with 1-year Onsite warranty</i> Add to 3-year warranty coverage - 3-year Priority Support* 45J9087 <i>ThinkCentre desktop with 3-year Onsite warranty</i> Add to 3-year warranty coverage - 3-year Priority Support* 45J9088 Add to 4-year warranty coverage - 4-year Priority Support* 45J9089 Add to 5-year warranty coverage - 5-year Priority Support* 45J9090 Add to 3-year warranty coverage - 3-year Priority Support 4-hour response* 45J9091 Add to 4-year warranty coverage - 4-year Priority Support 4-hour response* 45J9092 Add to 5-year warranty coverage - 5-year Priority Support 4-hour response* 45J9093 * Covered machine must have concurrent warranty coverage.	

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.

³ **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

⁴ **CD and DVD list** maximum rates; rates are variable and are often less than the maximum.

⁵ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.

⁷ **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

⁸ **Memory:** For PCs without a separate graphics card, memory supports both system and video. Accessible system memory may be up to 384MB less than the amount stated, depending on video mode.

⁹ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

¹⁰ **Modem speeds:** Public network download speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps for 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.

¹¹ **For combination drives,** maximum speeds only are given in the following order: CD read, CD write, CD re-write, DVD read.

¹² **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

¹³ **Wireless capability:** Requires compatible wireless-enabled options sold separately.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

¹⁵ **Update Connector** is available at no charge to registered customers during the limited warranty period. Line charges may apply.

¹⁶ **Embedded Security Subsystem** works with optional VPN software.

- ¹⁸ **Embedded Security Subsystem** may require download of client security software from the Web.
- ¹⁹ **Asset ID** allows system-specific information to be stored in a chip inside the system; it does not have any radio frequency support.
- ²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

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December 2011
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Personal Systems Reference Lenovo® ThinkStation® Workstations

December 2011 - Version 411



ThinkStation Family
(ThinkStation E30/C20/C20x/D20/S20)

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ThinkStation



Lenovo ThinkStation E30
with Intel HD Graphics



Lenovo ThinkStation E30
with ThinkVision® L2440p (4420HB2)



Lenovo ThinkStation E30



Lenovo ThinkStation E30
with toolless removable side cover



Lenovo ThinkStation E30



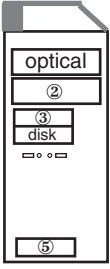
Lenovo ThinkStation Graphics Card Option
NVIDIA Quadro NVS 450 (57Y4398)

ThinkStation® E30 (7824) - TopSeller (Integrated Graphics)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Cores / Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7824-49U	4x5	Core i3-2100	3.1 2C/4T	1x2GB		1x500GB SATA		DVD±RW	Media		None	Intel HD	No	Pro 64
7824-51U	4x5	Core i3-2120	3.3 2C/4T	1x2GB		1x500GB SATA		DVD±RW	Media		None	Intel HD	No	Pro 64
7824-52U	4x5	Xeon E3-1225	3.1 4C/4T	1x4GB		1x500GB SATA		DVD±RW	Media		None	Intel HD	No	Pro 64
7824-53U	4x5	Xeon E3-1235	3.2 4C/8T	1x4GB		1x500GB SATA		DVD±RW	Media		None	Intel HD	No	Pro 64
7824-54U	4x5	Xeon E3-1245	3.3 4C/8T	1x4GB		1x500GB SATA		DVD±RW	Media		None	Intel HD	No	Pro 64
7824-97U	4x5	Core i3-2100	3.1 2C/4T	2x2GB	ECC	2x250GB SATA	0	DVD		Switch	None	Intel HD	No	Pro 64

- **True workstation-level performance at incredibly low price point**
- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache), integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz) Intel Core i3-2120 processor (2C/4T, 3.3GHz, 3MB Cache), integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1225 processor (4C/4T, 3.1GHz, 6MB Cache), Turbo Boost 2.0 (up to 3.4GHz), integrated Intel HD Graphics P3000, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1235 processor (4C/8T, 3.2GHz, 8MB Cache), Turbo Boost 2.0 (up to 3.6GHz), integrated Intel HD Graphics P3000, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1245 processor (4C/8T, 3.3GHz, 8MB Cache), Turbo Boost 2.0 (up to 3.7GHz), integrated Intel HD Graphics P3000, DDR3 memory controller (up to 1333MHz)	Tower  <ul style="list-style-type: none"> • Raven black color; metal case • 6.9"W x 17.0"D x 16.7"H (with handle) • 175mm W x 431mm D x 425mm H • 24.7 lb (11.2kg) max configuration • Removable handle on top front • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Recessed power button
Implementation	One LGA1155 socket	Bay 1: 5.25", 1.6" high, access, for optical Bay 2: 5.25", 1.6" high, access, open (optical) Bay 3: 3.5", 1" high, access, for media reader Bay 4: 3.5", 1" high, internal, for disk Bay 5: 3.5", 1" high, internal, for disk
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC, four 240-pin DIMM sockets; ECC model(s): 32GB max Non-ECC model(s): 16GB max	Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • ECC and non-ECC DIMMs cannot be mixed 	
Graphics	Intel HD Graphics in processor, uses main memory, one VGA, one DisplayPort™ (see <i>Rear ports</i> section)	
Media reader	<i>Some:</i> 25-in-1 media reader, internal USB 2.0	
Optical	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁺ Drive	
Disk(s)	250GB or 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"	
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	Intel AMT Intel AMT supported on model(s) with Xeon processor
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),	SECURITY <ul style="list-style-type: none"> • Security chip (see information on left) • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement (front or all) • <i>Chassis intrusion switch available on selected model(s)</i>
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in), one analog VGA DB-15 connector, one DisplayPort connector	
IEEE 1394 adptr	None	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet on planar, Intel 82579	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
ThinkVantage®	Supports ThinkVantage technologies	More compatible accessories, please see O-VEN sheet LIMITED WARRANTY¹ <ul style="list-style-type: none"> ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty <ul style="list-style-type: none"> • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 ⇒ More ThinkPlus services are available on S-TS sheet
Preload OS	Genuine Windows® 7 Professional 64	
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery • Password Manager • ThinkVantage Toolbox • Norton™ Internet Security (30 days of virus definitions) • Adobe Reader² • Adobe Flash® Player • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD (for DVD±RW model(s) only) • Corel Burn.Now™ (for DVD±RW model(s) only) • Ulead DVD MovieFactory® (for DVD±RW model(s) only) 	

ThinkStation® E30 (7824) - TopSeller (Discrete Graphics*)

Personal Systems Reference (PSREF)

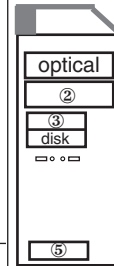
Type-model	Slot x bay	Processor	Cores / GHz	Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7824-55U	4x5	Xeon E3-1220	3.1	4C/4T	1x4GB		1x500GB SATA		DVD±RW	Media			Quadro 600	No	Pro 64
7824-56U	4x5	Xeon E3-1230	3.2	4C/8T	1x4GB	ECC	1x500GB SATA		DVD±RW	Media			Quadro 600	No	Pro 64
7824-57U	4x5	Xeon E3-1240	3.3	4C/8T	1x4GB	ECC	1x500GB SATA		DVD±RW	Media			Quadro 2000	No	Pro 64
7824-81U	4x5	Xeon E3-1280	3.5	4C/8T	2x2GB	ECC	160GB SSD+1TB SATA		DVD±RW	Media			Quadro 2000	No	Pro 64
7824-98U	4x5	Xeon E3-1240	3.3	4C/8T	2x2GB	ECC	2x150GB SATA	0	DVD±RW	Media	Switch	1394	Quadro 600	No	Pro 64
7824-99U	4x5	Xeon E3-1245	3.3	4C/8T	4x2GB	ECC	160GB SSD		DVD±RW	Media	Switch	1394	Quadro 2000	No	Pro 64

* All models on this page need a discrete graphics card. Integrated graphics in processor will not work.

- **True workstation-level performance at incredibly low price point**
- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1230 processor (4C/8T, 3.2GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.6GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1240 processor (4C/8T, 3.3GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.7GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1245 processor (4C/8T, 3.3GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.7GHz), integrated Intel HD Graphics P3000, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1280 processor (4C/8T, 3.5GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.9GHz), DDR3 memory controller (up to 1333MHz) One LGA1155 socket														
Implementation	One LGA1155 socket														
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC , four 240-pin DIMM sockets; ECC model(s): 32GB max Non-ECC model(s): 16GB max														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • ECC and non-ECC DIMMs cannot be mixed 														
Graphics	<i>Some:</i> NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W														
Media reader	25-in-1 media reader, internal USB 2.0														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
Disk(s)	<i>Some:</i> 500GB or 1TB, SATA 3.0Gb/s, 7200 rpm, 3.5" <i>Some:</i> 150GB, SATA 6.0Gb/s, 10000 rpm, 2.5" <i>Some:</i> 160GB Solid State Drive (SSD), SATA 3.0Gb/s, 1.8"														
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors														
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)														
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),														
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)														
IEEE 1394 adptr	<i>Some:</i> FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet on planar, Intel 82579														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black														
Mouse	Optical Wheel Mouse (USB connector), black														
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified														
ThinkVantage®	Supports ThinkVantage technologies														
Preload OS	Genuine Windows® 7 Professional 64														
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery • Password Manager • ThinkVantage Toolbox • Norton™ Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD (for DVD±RW model(s) only) • Corel Burn.Now™ (for DVD±RW model(s) only) • Ulead DVD MovieFactory® (for DVD±RW model(s) only) 														

Tower



- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 24.7 lb (11.2kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Bay 1: 5.25", 1.6" high, access, for optical
 Bay 2: 5.25", 1.6" high, access, open (optical)
 Bay 3: 3.5", 1" high, access, for media reader
 Bay 4: 3.5", 1" high, internal, for disk
 Bay 5: 3.5", 1" high, internal, for disk

Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, 32-bit PCI 2.3
 Slot 4: half-length, full-height, 32-bit PCI 2.3

Intel AMT

Intel AMT supported on model(s) with Xeon processor

SECURITY

- Security chip (see information on left)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch available on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-VEN sheet

LIMITED WARRANTY¹

- ⇒ **3-year parts and labor**
- ⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ⇒ **ThinkPlus™ services available; see <http://lenovo.com/thinkplus/warranty>**
 - Onsite service upgrade options (in eligible locations)⁷
 - Post warranty maintenance services
- ⇒ **24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378**
- ⇒ **More ThinkPlus services are available on S-TS sheet**

ThinkStation® E30 (7824) - TopSeller (Discrete Graphics*) - May 2011

Personal Systems Reference (PSREF)

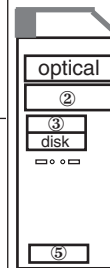
Type-model	Slot x bay	Processor	Cores / Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7824-94U	4x5	Core i3-2100	3.1 2C/4T	1x2GB	None	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 400	No	Pro 64
7824-95U	4x5	Xeon E3-1220	3.1 4C/4T	1x4GB	None	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 400	No	Pro 64

* All models on this page need a discrete graphics card. Integrated graphics in processor will not work.

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- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache), integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache), Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) One LGA1155 socket													
Implementation	One LGA1155 socket													
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC, four 240-pin DIMM sockets; ECC model(s): 32GB max Non-ECC model(s): 16GB max													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • ECC and non-ECC DIMMs cannot be mixed 													
Graphics	NVIDIA® Quadro® 400, PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W													
Media reader	25-in-1 media reader, internal USB 2.0													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"													
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors													
Chipset	Intel C206 Chipset, Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),													
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)													
IEEE 1394 adptr	None													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio													
Ethernet	One gigabit ethernet on planar, Intel 82579													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery • Password Manager • ThinkVantage Toolbox • Norton™ Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash™ Player • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD (for DVD±RW model(s) only) • Corel Burn.Now™ (for DVD±RW model(s) only) • Ulead DVD MovieFactory® (for DVD±RW model(s) only) 													

Tower



- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 24.7 lb (11.2kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Bay 1: 5.25", 1.6" high, access, for optical
 Bay 2: 5.25", 1.6" high, access, open (optical)
 Bay 3: 3.5", 1" high, access, for media reader
 Bay 4: 3.5", 1" high, internal, for disk
 Bay 5: 3.5", 1" high, internal, for disk

Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, 32-bit PCI 2.3
 Slot 4: half-length, full-height, 32-bit PCI 2.3

Intel AMT

Intel AMT supported on model(s) with Xeon processor

SECURITY

- Security chip (see information on left)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch available on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-VEN sheet

LIMITED WARRANTY¹

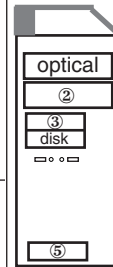
- ⇒ 3-year parts and labor
- ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
- ⇒ ThinkPlus™ services available; see <http://lenovo.com/thinkplus/warranty>
 - Onsite service upgrade options (in eligible locations)⁷
 - Post warranty maintenance services
- ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
- ⇒ More ThinkPlus services are available on S-TS sheet

Type-model	Slot x bay	Processor	Cores / Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7824-B2U	4x5	Core i5-2400	3.1 4C/4T	1x2GB	None	1x250GB SATA	No	DVD±RW	Media	None	None		No	Pro 64
7824-B3U	4x5	Core i5-2400	3.1 4C/4T	1x2GB	None	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 400	No	Pro 64
7824-B4U	4x5	Core i7-2600	3.4 4C/8T	1x2GB	None	1x500GB SATA	No	DVD±RW	Media	None	None		No	Pro 64
7824-B5U	4x5	Core i7-2600	3.4 4C/8T	1x4GB	None	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 600	No	Pro 64

* All models on this page need a discrete graphics card. Integrated graphics in processor will not work.

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- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i5-2400 processor (4C/4T, 3.1GHz, 6MB Cache), integrated Intel HD Graphics 2000, Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) Intel Core i7-2600 processor (4C/8T, 3.4GHz, 8MB Cache), integrated Intel HD Graphics 2000, Turbo Boost 2.0 (up to 3.8GHz), DDR3 memory controller (up to 1333MHz)													
Implementation	One LGA1155 socket													
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC , four 240-pin DIMM sockets; ECC model(s): 32GB max Non-ECC model(s): 16GB max													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • ECC and non-ECC DIMMs cannot be mixed 													
Graphics	Some: NVIDIA® Quadro® 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W Some: NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W													
Media reader	25-in-1 media reader, internal USB 2.0													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Disk(s)	250GB or 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"													
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors													
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),													
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)													
IEEE 1394 adptr	None													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio													
Ethernet	One gigabit ethernet on planar, Intel 82579													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery • Password Manager • ThinkVantage Toolbox • Norton™ Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD (for DVD±RW model(s) only) • Corel Burn.Now™ (for DVD±RW model(s) only) • Ulead DVD MovieFactory® (for DVD±RW model(s) only) 													

Tower


- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 24.7 lb (11.2kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Bay 1: 5.25", 1.6" high, access, for optical
 Bay 2: 5.25", 1.6" high, access, open (optical)
 Bay 3: 3.5", 1" high, access, for media reader
 Bay 4: 3.5", 1" high, internal, for disk
 Bay 5: 3.5", 1" high, internal, for disk

Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, 32-bit PCI 2.3
 Slot 4: half-length, full-height, 32-bit PCI 2.3

Intel AMT

Intel AMT supported on model(s) with Xeon processor

SECURITY

- Security chip (see information on left)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch available on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-VEN sheet

LIMITED WARRANTY¹

- ⇒ **3-year parts and labor**
- ⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ⇒ **ThinkPlus™ services available; see <http://lenovo.com/thinkplus/warranty>**
 - Onsite service upgrade options (in eligible locations)⁷
 - Post warranty maintenance services
- ⇒ **24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378**
- ⇒ **More ThinkPlus services are available on S-TS sheet**

ThinkStation® E30 (7824) - TopSeller (Discrete Graphics*) - Dec 2011

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Cores / GHz	Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7824-C4U	4x5	Core i3-2130	3.4	2C/4T	1x2GB	No	1x500GB SATA	No	DVD±RW	Media	None	None	None	No	Pro 64

* All models on this page need a discrete graphics card. Integrated graphics in processor will not work.

- **True workstation-level performance at incredibly low price point**
- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3-2130 processor (2C/4T, 3.4GHz, 3MB Cache), integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz)														
Implementation	One LGA1155 socket														
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC, four 240-pin DIMM sockets; ECC model(s): 32GB max Non-ECC model(s): 16GB max														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • ECC and non-ECC DIMMs cannot be mixed 														
Graphics	None														
Media reader	25-in-1 media reader, internal USB 2.0														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
Disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"														
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors														
Chipset	Intel C206 Chipset, Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)														
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),														
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)														
IEEE 1394 adptr	None														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet on planar, Intel 82579														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black														
Mouse	Optical Wheel Mouse (USB connector), black														
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified														
ThinkVantage®	Supports ThinkVantage technologies														
Preload OS	Genuine Windows® 7 Professional 64														
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery • Password Manager • ThinkVantage Toolbox • Norton™ Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD (for DVD±RW model(s) only) • Corel Burn.Now™ (for DVD±RW model(s) only) • Ulead DVD MovieFactory® (for DVD±RW model(s) only) 														

Tower

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 24.7 lb (11.2kg) max configuration
- 25-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Bay 1: 5.25", 1.6" high, access, for optical
 Bay 2: 5.25", 1.6" high, access, open (optical)
 Bay 3: 3.5", 1" high, access, for media reader
 Bay 4: 3.5", 1" high, internal, for disk
 Bay 5: 3.5", 1" high, internal, for disk

Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, 32-bit PCI 2.3
 Slot 4: half-length, full-height, 32-bit PCI 2.3

Intel AMT

Intel AMT supported on model(s) with Xeon processor

SECURITY

- Security chip (see information on left)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch available on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-VEN sheet

LIMITED WARRANTY¹

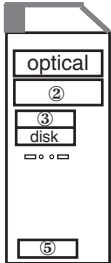
- ⇒ 3-year parts and labor
- ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
- ⇒ ThinkPlus™ services available; see <http://lenovo.com/thinkplus/warranty>
 - Onsite service upgrade options (in eligible locations)⁷
 - Post warranty maintenance services
- ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
- ⇒ More ThinkPlus services are available on S-TS sheet

ThinkStation® E30 (7783) - Integrated Graphics

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Cores / GHz	Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7783-31U	4x5	Core i3-2100	3.1	2C/4T	1x2GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Intel HD	No	Pro 64
7783-32U	4x5	Core i3-2120	3.3	2C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Intel HD	No	Pro 64
7783-33U	4x5	Xeon E3-1225	3.1	4C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Intel HD	No	Pro 64
7783-34U	4x5	Xeon E3-1235	3.2	4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Intel HD	No	Pro 64

- **True workstation-level performance at incredibly low price point**
- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache), integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz) Intel Core i3-2120 processor (2C/4T, 3.3GHz, 3MB Cache), integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1225 processor (4C/4T, 3.1GHz, 6MB Cache), Turbo Boost 2.0 (up to 3.4GHz), integrated Intel HD Graphics P3000, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1235 processor (4C/8T, 3.2GHz, 8MB Cache), Turbo Boost 2.0 (up to 3.6GHz), integrated Intel HD Graphics P3000, DDR3 memory controller (up to 1333MHz)	<div><div>Tower</div><div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 17.0"D x 16.7"H (with handle)• 175mm W x 431mm D x 425mm H• 24.7 lb (11.2kg) max configuration• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Recessed power button</div></div> <div>Bay 1: 5.25", 1.6" high, access, for optical Bay 2: 5.25", 1.6" high, access, open (optical) Bay 3: 3.5", 1" high, access, for media reader Bay 4: 3.5", 1" high, internal, for disk Bay 5: 3.5", 1" high, internal, for disk</div> <div>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3</div>
Implementation	One LGA1155 socket	
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC, four 240-pin DIMM sockets; ECC model(s): 32GB max Non-ECC model(s): 16GB max	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed• ECC and non-ECC DIMMs cannot be mixed	
Graphics	Intel HD Graphics in processor, uses main memory, one VGA, one DisplayPort™ (see <i>Rear ports</i> section)	
Media reader	25-in-1 media reader, internal USB 2.0	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
Disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"	
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),	
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in), one analog VGA DB-15 connector, one DisplayPort connector	
IEEE 1394 adptr	None	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet on planar, Intel 82579	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified	
ThinkVantage®	Supports ThinkVantage technologies	
Preload OS	Genuine Windows® 7 Professional 64	
Preloaded applications	<ul style="list-style-type: none">• Rescue and Recovery• Password Manager• ThinkVantage Toolbox• Norton™ Internet Security (30 days of virus definitions)• Adobe Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® WinDVD (for DVD±RW model(s) only)• Corel Burn.Now™ (for DVD±RW model(s) only)• Ulead DVD MovieFactory® (for DVD±RW model(s) only)	
		<div><div>Intel AMT</div><div>Intel AMT supported on model(s) with Xeon processor</div></div> <div><div>SECURITY</div><div><ul style="list-style-type: none">• Security chip (see information on left)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement (front or all)• Chassis intrusion switch available on selected model(s)</div></div> <div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div> <div>More compatible accessories, please see O-VEN sheet</div> <div><div>LIMITED WARRANTY¹</div><div><ul style="list-style-type: none">⇒ 3-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378⇒ More ThinkPlus services are available on S-TS sheet</div></div>

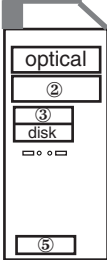
See footnotes for important warranty information
 US models announced April 19, 2011

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 (VEN1-1) April 2011

ThinkStation® E30 (7783) - Discrete Graphics

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Cores / Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis Intrusion switch	1394 adptr	Graphics adapter(s)	Win7 Global preload
7783-35U	4x5	Xeon E3-1220	3.1 4C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro NVS 300	No Pro 64
7783-36U	4x5	Xeon E3-1220	3.1 4C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 600	No Pro 64
7783-37U	4x5	Xeon E3-1230	3.2 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro NVS 300	No Pro 64
7783-38U	4x5	Xeon E3-1230	3.2 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 600	No Pro 64
7783-39U	4x5	Xeon E3-1240	3.3 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 600	No Pro 64
7783-41U	4x5	Xeon E3-1240	3.3 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 2000	No Pro 64
7783-42U	4x5	Xeon E3-1270	3.4 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 600	No Pro 64
7783-43U	4x5	Xeon E3-1270	3.4 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 2000	No Pro 64

Processor	Intel® Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1230 processor (4C/8T, 3.2GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.6GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1240 processor (4C/8T, 3.3GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.7GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1270 processor (4C/8T, 3.4GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.8GHz), DDR3 memory controller (up to 1333MHz)	Tower  <ul style="list-style-type: none"> • Raven black color; metal case • 6.9"W x 17.0"D x 16.7"H (with handle) • 175mm W x 431mm D x 425mm H • 24.7 lb (11.2kg) max configuration • Removable handle on top front • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Recessed power button
Implementation	One LGA1155 socket	
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC , four 240-pin DIMM sockets; ECC model(s): 32GB max Non-ECC model(s): 16GB max	
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • ECC and non-ECC DIMMs cannot be mixed 	
Graphics	<i>Some:</i> NVIDIA® Quadro® NVS 300 , PCIe x16 adapter, 512MB, DMS59 to dual single-link DVI-I, 17.5W <i>Some:</i> NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W	Bay 1: 5.25", 1.6" high, access, for optical Bay 2: 5.25", 1.6" high, access, open (optical) Bay 3: 3.5", 1" high, access, for media reader Bay 4: 3.5", 1" high, internal, for disk Bay 5: 3.5", 1" high, internal, for disk Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Media reader	25-in-1 media reader, internal USB 2.0	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
Disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"	
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	Intel AMT Intel AMT supported on model(s) with Xeon processor
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),	SECURITY <ul style="list-style-type: none"> • Security chip (see information on left) • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement (front or all) • Chassis intrusion switch available on selected model(s)
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr	None	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet on planar, Intel 82579	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
ThinkVantage®	Supports ThinkVantage technologies	More compatible accessories, please see O-VEN sheet
Preload OS	Genuine Windows® 7 Professional 64	LIMITED WARRANTY¹ ⇨ 3-year parts and labor ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations) ⁷ • Post warranty maintenance services ⇨ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378 ⇨ More ThinkPlus services are available on S-TS sheet
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery • Password Manager • ThinkVantage Toolbox • Norton™ Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD (for DVD±RW model(s) only) • Corel Burn.Now™ (for DVD±RW model(s) only) • Ulead DVD MovieFactory® (for DVD±RW model(s) only) 	

ThinkStation® E30 (7783) - Discrete Graphics* (May 2011)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Cores / Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7783-88U	4x5	Core i3-2100	3.1 2C/4T	1x2GB	ECC	1x500GB SATA	No	DVD±RW	None	None	None	Quadro 400		Pro 64
7783-89U	4x5	Xeon E3-1220	3.1 4C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	None	None	None	Quadro 400		Pro 64
7783-91U	4x5	Xeon E3-1230	3.2 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	None	None	None	Quadro 400		Pro 64
7783-92U	4x5	Xeon E3-1230	3.2 4C/8T	4x2GB	ECC	1x500GB SATA	No	DVD±RW	None	None	None	Quadro 600	Global	Pro 64

* All models on this page need a discrete graphics card. Integrated graphics in processor will not work.

- **True workstation-level performance at incredibly low price point**
- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1230 processor (4C/8T, 3.2GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.6GHz), DDR3 memory controller (up to 1333MHz) One LGA1155 socket													
Implementation	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC, four 240-pin DIMM sockets;													
Memory	ECC model(s): 32GB max Non-ECC model(s): 16GB max													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • ECC and non-ECC DIMMs cannot be mixed 													
Graphics	Some: NVIDIA® Quadro® 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W Some: NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W													
Media reader	None													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"													
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors													
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),													
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)													
IEEE 1394 adptr	None													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio													
Ethernet	One gigabit ethernet on planar, Intel 82579													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery • Password Manager • ThinkVantage Toolbox • Norton™ Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® WinDVD (for DVD±RW model(s) only) • Corel Burn.Now™ (for DVD±RW model(s) only) • Ulead DVD MovieFactory® (for DVD±RW model(s) only) 													

Tower

- Raven black color; metal case
- 6.9"W x 17.0"D x 16.7"H (with handle)
- 175mm W x 431mm D x 425mm H
- 24.7 lb (11.2kg) max configuration
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Recessed power button

Bay 1: 5.25", 1.6" high, access, for optical
 Bay 2: 5.25", 1.6" high, access, open (optical)
 Bay 3: 3.5", 1" high, access, for media reader
 Bay 4: 3.5", 1" high, internal, for disk
 Bay 5: 3.5", 1" high, internal, for disk

Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)
 Slot 2: half-length, full-height, PCIe 2.0 x1
 Slot 3: half-length, full-height, 32-bit PCI 2.3
 Slot 4: half-length, full-height, 32-bit PCI 2.3

Intel AMT

Intel AMT supported on model(s) with Xeon processor

SECURITY

- Security chip (see information on left)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch available on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-VEN sheet

LIMITED WARRANTY¹

- ⇒ 3-year parts and labor
- ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
- ⇒ ThinkPlus™ services available; see <http://lenovo.com/thinkplus/warranty>
 - Onsite service upgrade options (in eligible locations)⁷
 - Post warranty maintenance services
- ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
- ⇒ More ThinkPlus services are available on S-TS sheet

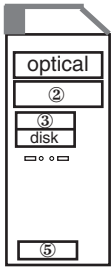
ThinkStation® E30 (7783) - Discrete Graphics* (October 2011)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Cores / Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7783-93U	4x5	Core i5-2400	3.1 4C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	None	None	Pro 64
7783-94U	4x5	Core i5-2400	3.1 4C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 400	None	Pro 64
7783-95U	4x5	Core i5-2400	3.1 4C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 600	None	Pro 64
7783-96U	4x5	Core i7-2600	3.4 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 600	None	Pro 64
7783-97U	4x5	Core i7-2600	3.4 4C/8T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	Media	None	None	Quadro 2000D	None	Pro 64

* All models on this page need a discrete graphics card. Integrated graphics in processor will not work.

- **True workstation-level performance at incredibly low price point**
- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i5-2400 processor (4C/4T, 3.1GHz, 6MB Cache) , integrated Intel HD Graphics 2000, Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) Intel Core i7-2600 processor (4C/8T, 3.4GHz, 8MB Cache) , integrated Intel HD Graphics 2000, Turbo Boost 2.0 (up to 3.8GHz), DDR3 memory controller (up to 1333MHz)	Tower  <ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 17.0"D x 16.7"H (with handle)• 175mm W x 431mm D x 425mm H• 24.7 lb (11.2kg) max configuration• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Recessed power button
Implementation	One LGA1155 socket	
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC , four 240-pin DIMM sockets; <i>ECC model(s):</i> 32GB max <i>Non-ECC model(s):</i> 16GB max	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed• ECC and non-ECC DIMMs cannot be mixed	
Graphics	<i>Some: NVIDIA® Quadro® 400</i> , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W <i>Some: NVIDIA Quadro 600</i> , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W <i>Some: NVIDIA Quadro 2000D</i> , PCIe x16 adapter, 1GB, two dual-link DVI-I, 62W	
Media reader	25-in-1 media reader, internal USB 2.0	Bay 1: 5.25", 1.6" high, access, for optical
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	Bay 2: 5.25", 1.6" high, access, open (optical)
Disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"	Bay 3: 3.5", 1" high, access, for media reader
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	Bay 4: 3.5", 1" high, internal, for disk
		Bay 5: 3.5", 1" high, internal, for disk
		Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)
		Slot 2: half-length, full-height, PCIe 2.0 x1
		Slot 3: half-length, full-height, 32-bit PCI 2.3
		Slot 4: half-length, full-height, 32-bit PCI 2.3
Intel AMT Intel AMT supported on model(s) with Xeon processor		
SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement (front or all)• Chassis intrusion switch available on selected model(s)		
GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating		
More compatible accessories, please see O-VEN sheet		
LIMITED WARRANTY¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378⇒ More ThinkPlus services are available on S-TS sheet		

See footnotes for important warranty information
 US models announced October 4, 2011

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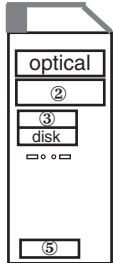
ThinkStation® E30 (7783) - Discrete Graphics* (December 2011)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Cores / GHz	Threads	Memory DIMMs	ECC	Disk(s)	Pre-conf RAID	SATA optical	Media reader	Chassis intrusion switch	1394 adptr	Graphics adapter(s)	Global	Win7 preload
7783-B5U	4x5	Core i3-2130	3.4	2C/4T	1x4GB	ECC	1x500GB SATA	No	DVD±RW	None	None	None	None	No	Pro 64

* All models on this page need a discrete graphics card. Integrated graphics in processor will not work.

- **True workstation-level performance at incredibly low price point**
- **High Reliability with Independent Software Vendors (ISV) certified applications and ECC memory support**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3-2130 processor (2C/4T, 3.4GHz, 3MB Cache) , integrated Intel HD Graphics 2000, DDR3 memory controller (up to 1333MHz)	<div><div>Tower</div><div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 17.0"D x 16.7"H (with handle)• 175mm W x 431mm D x 425mm H• 24.7 lb (11.2kg) max configuration• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Recessed power button</div></div> <div>Bay 1: 5.25", 1.6" high, access, for optical</div> <div>Bay 2: 5.25", 1.6" high, access, open (optical)</div> <div>Bay 3: 3.5", 1" high, access, for media reader</div> <div>Bay 4: 3.5", 1" high, internal, for disk</div> <div>Bay 5: 3.5", 1" high, internal, for disk</div> <div>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</div> <div>Slot 2: half-length, full-height, PCIe 2.0 x1</div> <div>Slot 3: half-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: half-length, full-height, 32-bit PCI 2.3</div> <div>Intel AMT</div> <div>Intel AMT supported on model(s) with Xeon processor</div> <div>SECURITY</div> <div><ul style="list-style-type: none">• Security chip (see information on left)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement (front or all)• Chassis intrusion switch available on selected model(s)</div> <div>GREENGUARD® certified</div> <div>RoHS-compliant</div> <div>EPEAT™ Gold rating</div> <div>More compatible accessories, please see O-VEN sheet</div> <div>LIMITED WARRANTY¹</div> <div>⇒ 3-year parts and labor</div> <div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</div> <div>⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services</div> <div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div> <div>⇒ More ThinkPlus services are available on S-TS sheet</div>
Implementation	One LGA1155 socket	
Memory	UDIMM, PC3-10600 1333MHz DDR3, ECC or non-ECC , four 240-pin DIMM sockets; <i>ECC model(s):</i> 32GB max <i>Non-ECC model(s):</i> 16GB max	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed• ECC and non-ECC DIMMs cannot be mixed	
Graphics	None	
Media reader	None	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
Disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"	
Disk Controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),	
Rear ports	Six USB 2.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)	
IEEE 1394 adptr	None	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet on planar, Intel 82579	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	280 watts with variable speed fan, autosensing, 85% PSU, 80 PLUS® Bronze qualified	
ThinkVantage®	Supports ThinkVantage technologies	
Preload OS	Genuine Windows® 7 Professional 64	
Preloaded applications	<ul style="list-style-type: none">• Rescue and Recovery• Password Manager• ThinkVantage Toolbox• Norton™ Internet Security (30 days of virus definitions)• Adobe Reader®• Adobe Flash® Player• Skype™ for Windows• Microsoft® Office 2010 preloaded; purchase product key to activate• Corel® WinDVD (for DVD±RW model(s) only)• Corel Burn.Now™ (for DVD±RW model(s) only)• Ulead DVD MovieFactory® (for DVD±RW model(s) only)	

Partial list of accessories supported on ThinkStation E30

Memory⁶³

2GB PC3-10600 DDR3 Non-ECC UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 Non-ECC (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 Non-ECC UDIMM	0A36527	ann 04/18/11
2GB PC3-10600 DDR3 ECC UDIMM	43R2033	ann 03/31/09
4GB PC3-10600 DDR3 ECC UDIMM	57Y4138	ann 08/04/09

⁶³ Mixing of ECC and non-ECC DIMMs is not supported

More information on memory and processor configuration, operation and limitation, please visit:

www.lenovo.com/support/thinkstationaccessories

Optical

DVD-ROM DL SATA1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11
Blu-ray™ Burner SATA1.5Gb/s	45K1675	ann 03/31/09

Storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann 03/31/09

Removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
Lenovo® Slim USB Portable DVD Burner	0A33988	ann 06/14/11

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann 12/20/11

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

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

Monitors*ThinkVision®:*

L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann 09/13/11
L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann 09/13/11
LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann 09/13/11

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort Monitor Cable (0A36537).

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

Monitor accessories⁴⁶

ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

Graphics

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to DisplayPort Monitor Cable ⁵⁰	0A36537	ann 09/13/11
NVIDIA® Quadro® 256MB NVS 295	45K1669	ann 04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59 ⁶⁵	0A36528	ann 04/26/11
NVIDIA Quadro 512MB NVS 450	57Y4398	ann 01/19/10
NVIDIA Quadro 512MB 400	0A36535	ann 06/28/11
NVIDIA Quadro 1GB 600	0A36183	ann 10/26/10
NVIDIA Quadro 1GB 2000	57Y4479	ann 10/26/10
NVIDIA Quadro 1GB 2000D	0A36541	ann 11/01/11

⁵⁰ Attaches to selected DisplayPort graphics cards.⁶⁵ Contains DMS59 to dual-DVI cable and DMS59 to dual-VGA cable.

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

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

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

ThinkStation.



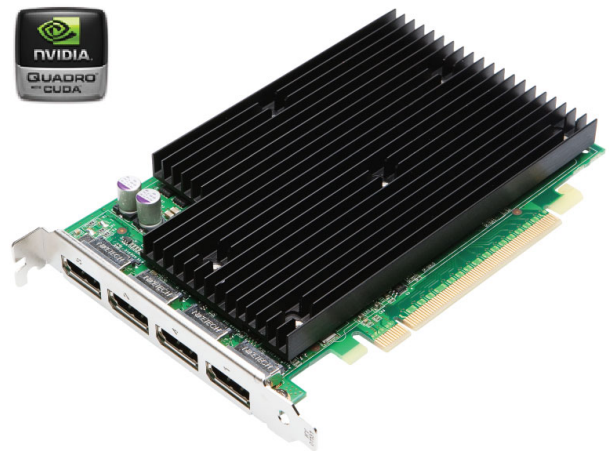
Lenovo ThinkStation C20 (left)
Lenovo ThinkStation C20x (right)



Lenovo ThinkStation C20x



Lenovo ThinkStation C20/C20x Stack



Lenovo ThinkStation Graphics Card Option
NVIDIA® Quadro® NVS 450 (57Y4398)



Multi-monitor Display with Optional Lenovo ThinkVision Monitor and Dual NVIDIA Quadro NVS 450
(Both Lenovo ThinkStation C20/C20x)

Type-model	Slot x bay	Processor(s)	GHz	Max Turbo GHz	Memory DIMMs	Memory type	Disk(s)	Disk size	Pre-conf RAID	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Avail date
4265-46U 6x4	1 x	E5620	2.40	2.66	2 x 2GB	UDIMM	1x500GB ² SATA	3.5"	No	Switch	1 x Quadro FX580		Pro 64	Jun 10
4265-54U 6x4	1 x	E5620	2.40	2.66	2 x 2GB	UDIMM	1x300GB SATA	2.5"	No		1 x Quadro FX1800		Pro 64	Jun 10
4265-55U 6x4	1 x	E5503	2.00		2 x 2GB	UDIMM	1x500GB SATA	3.5"	No		1 x Quadro FX380		Pro 64	Jun 10
4265-72U 6x4	1 x	E5507	2.26		2 x 2GB	UDIMM	1x500GB SATA	3.5"	No		1 x Quadro FX580		Pro 64	Jun 10
4265-92U 6x4	1 x	E5620	2.40	2.66	2 x 2GB	UDIMM	1x500GB SATA	3.5"	No		1 x Quadro 600		Pro 64	Nov10
4265-93U 6x4	1 x	E5620	2.40	2.66	2 x 2GB	UDIMM	1x300GB SATA	2.5"	No		1 x Quadro 2000		Pro 64	Nov10
4265-94U 6x4	1 x	E5507	2.26		2 x 2GB	UDIMM	1x500GB SATA	3.5"	No		1 x Quadro 600	Global	Pro 64	Nov10
4265-95U 6x4	1 x	E5640	2.66	2.93	2 x 2GB	UDIMM	1x500GB SATA	3.5"	No		1 x Quadro NVS450		Pro 64	Nov10

- **High performance workstation with smallest-possible form factor**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5507 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620 or E5640 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache	Tower	
Implementation	Two LGA1366 sockets	<ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit	
Memory	4GB std, 24GB max, UDIMM, PC3-10600 1333MHz DDR3**, ECC , 6-channel capable, six 240-pin DIMM sockets*** ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller *** Over three DIMMs requires dual processors	Bay ① 5.25", 1.6" high, external, std optical Bay ② 3.5", 1" high, internal, std disk Bay ③ 3.5", 1" high, internal, opt disk Bay ④ 3.5", 1" high, internal, opt disk	
Graphics	<i>Some:</i> NVIDIA® Quadro® NVS 450 , PCIe x16 adapter, 512MB, four DisplayPort™, 35W <i>Some:</i> NVIDIA Quadro FX 380 , PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W <i>Some:</i> NVIDIA Quadro FX 580 , PCIe x16 adapter, 512MB, two DisplayPort, one dual-link DVI-I****, 40W <i>Some:</i> NVIDIA Quadro FX 1800 , PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W <i>Some:</i> NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W **** Only two display connectors are active at a time	Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x16 (x4 electrical) Slot 6: half-length, full-height, 32-bit PCI 2.3 * Adapters >75W use auxiliary power connector(s) from PSU	
Diskette drive	None	SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• USB port disablement (front or all)• <i>Some:</i> Chassis intrusion switch	
Media reader	None		
SATA disk(s)	<i>Some:</i> 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5" <i>Some:</i> 300GB , SATA 3.0Gb/s, 10000 rpm, 2.5" Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s		
SATA DVD±RW	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID ⁰ 0, 1, 5 support		
Disk controller			
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O		
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),		
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in		
IEEE 1394 adptr	None		
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755		
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	Supports ThinkVantage® technologies	
Mouse	Optical Wheel Mouse (USB connector), black	GREENGUARD® certified	
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	RoHS-compliant	
Cooling	Five fans standard (power supply, first processor, one on front, two on rear)	EPEAT™ Gold rating	
Rack mount	Rack shelf support or optional sliding rack mount rail kit support	LIMITED WARRANTY¹	
Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64		<ul style="list-style-type: none">↳ 3-year parts and labor↳ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)↳ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty↳ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 800-426-7378	
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Corel® WinDVD® (DVD±RW)			
Accessories 2GB PC3-10600 DDR3 ECC UDIMM 43R2033 4GB PC3-10600 DDR3 ECC UDIMM 57Y4138 Blu-ray™ Burner SATA 1.5Gb/s 45K1675 ThinkVision® L2440p Wide 24" Monitor 4420HB2 More accessories on O-MAD sheet			
Other accessories at lenovo.com/accessories			

See footnotes for important warranty information

US models announced November 2, 2010; previous models on June 15, 2010

US models withdrawn effective February or May 2011

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(MAD1-7) November 2010

ThinkStation® C20 (4265) - TopSeller (Windows 7) - February 2011

Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
≈ 4265-97U	6x4	1xE5603	1.6	4	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1xQuadro FX380	No	Pro 64	02/15/11
4265-98U	6x4	1xE5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1xQuadro 600	No	Pro 64	02/15/11
4265-99U	6x4	1xE5645	2.40	6	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1xNVS 450	No	Pro 64	02/15/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor(s)	<p>Intel® Xeon® Processor E5603 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache</p> <p>Intel Xeon Processor E5607 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache</p> <p>Intel Xeon Processor E5645 with six-core, 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache</p>												
Implementation	Two LGA1366 sockets, supports up to two processors												
Memory	24GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, six 240-pin DIMM sockets												
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over three DIMMs requires dual processors 												
Graphics	<p><i>Some:</i> NVIDIA® Quadro® NVS 450, PCIe x16 adapter, 512MB, four DisplayPort™, 35W</p> <p><i>Some:</i> NVIDIA Quadro FX 380, PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W</p> <p><i>Some:</i> NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W</p>												
Media reader	None												
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"												
Disk Controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID 0, 1, 5 support												
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O												
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)												
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in												
IEEE 1394 adptr	None												
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec												
Speaker	Internal speaker for business audio												
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755												
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black												
Mouse	Optical Wheel Mouse (USB connector), black												
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified												
ThinkVantage®	Supports ThinkVantage technologies												
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)												
Preload OS	Genuine Windows® 7 Professional 64												
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 												

Tower

- Rack-mountable to 3U
- Raven black color; metal case
- 5.1"W x 17.5"D x 16.8"H
- 130mm W x 444mm D x 427mm H
- 40.7 lb (18.5kg) max configuration
- 24-liter
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 3.5", 1" high, internal, std disk
 Bay 3: 3.5", 1" high, internal, opt disk
 Bay 4: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x16 (x4 electrical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-MAD sheet

See footnotes for important warranty information

US models announced February 15, 2011

≈ US model withdrawn effective June 2011

© Lenovo
(MAD2-2) March 2011

ThinkStation® C20 (4265) - TopSeller (Windows 7) - April 2011

Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4265-1MU	6x4	1xE5603	1.6	4	2x2GB	1x500GB SATA	No	DVD±RW	None	1xQuadro 400	No	Pro 64	04/26/11
<ul style="list-style-type: none">• High performance workstation with smallest-possible form factor• Environmentally friendly, cool, and quiet with rock solid engineering• This small and medium business (SMB) model is part of the US TopSeller™ Program• This system is Microsoft Office 2010 Product Key Ready (O10PKR)													
<div>Processor(s)Intel® Xeon® Processor E5603 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache</div> <div>ImplementationTwo LGA1366 sockets, supports up to two processors</div> <div>Memory24GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC, 6-channel capable, six 240-pin DIMM sockets</div> <div>Additional memory disclaimers<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed• Over three DIMMs requires dual processors</div> <div>GraphicsNVIDIA® Quadro® 400, PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W</div> <div>Media readerNone</div> <div>OpticalSuper Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</div> <div>Hard drive(s)500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"</div> <div>Disk ControllerSerial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID 0, 1, 5 support</div> <div>ChipsetIntel 5520 Chipset, Intel ICH10R, Winbond® W83627DHG-P Super I/O</div> <div>Front portsTwo USB 2.0, microphone (3.5mm), headphone (3.5mm)</div> <div>Rear portsEight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in</div> <div>IEEE 1394 adptrNone</div> <div>AudioHigh Definition (HD) Audio, Analog Devices AD1988A codec</div> <div>SpeakerInternal speaker for business audio</div> <div>EthernetOne gigabit ethernet on planar, Broadcom® BCM5755</div> <div>Security chipBroadcom Trusted Platform Module, TCG 1.2-compliant</div> <div>KeyboardPreferred Pro USB Keyboard (USB connector), 104-key, black</div> <div>MouseOptical Wheel Mouse (USB connector), black</div> <div>Power supply800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified</div> <div>ThinkVantage®Supports ThinkVantage technologies</div> <div>Limited Warranty3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)</div> <div>Preload OS</div> <div>Preloaded applicationsGenuine Windows® 7 Professional 64<ul style="list-style-type: none">• Rescue and Recovery®• ThinkVantage System Update• ThinkVantage Toolbox• Norton® Internet Security (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft® Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW model(s) only)• Roxio MyDVD® (DVD±RW model(s) only)• Corel® WinDVD® (DVD or DVD±RW model(s) only)• Ulead® DVD MovieFactory® (Blu-ray model(s) only)</div>										<div><div>Tower</div><div><div><div>optical</div><div><div>disk</div><div>disk</div><div>disk</div></div></div><div><ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div></div><div>Bay 1: 5.25", 1.6" high, external, std optical</div><div>Bay 2: 3.5", 1" high, internal, std disk</div><div>Bay 3: 3.5", 1" high, internal, opt disk</div><div>Bay 4: 3.5", 1" high, internal, opt disk</div><div>Slot 1: half-length, full-height, PCIe x1</div><div>Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)</div><div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div><div>Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)</div><div>Slot 5: full-length, full-height, PCIe x16 (x4 electrical)</div><div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div><div>* Adapters >75W use auxiliary power connector(s) from PSU</div></div>			
										<div><div>SECURITY</div><div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• USB port disablement (front or all)• Chassis intrusion switch on selected model(s)</div></div>			
										<div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div>			
More compatible accessories, please see O-MAD sheet													

ThinkStation® C20 (4265) - TopSeller (Windows 7) - July 2011

Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4265-2EU	6x4	1xX5650	2.66	6	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1xQuadro 2000	No	Pro 64	07/19/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- Part of the US TopSeller™ Program
- Microsoft Office 2010 Product Key Ready (O10PKR)

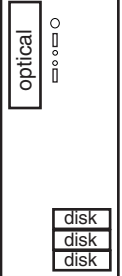
Processor(s)	Intel® Xeon® Processor X5650 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	<div><div>optical</div><div><div>○</div><div>□</div><div>□</div><div>□</div><div>□</div><div>□</div></div><div><div>disk</div><div>disk</div><div>disk</div></div></div> <div><ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit</div>
Implementation	Two LGA1366 sockets, supports up to two processors	
Memory	24GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, six 240-pin DIMM sockets	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed• Over three DIMMs requires dual processors	
Graphics	NVIDIA® Quadro® 2000 , PCIe x16 adapter, 1GB, two DisplayPort™, one dual-link DVI-I, 62W	
Media reader	None	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"	
Disk Controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID 0, 1, 5 support	
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O	
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)	
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in	
IEEE 1394 adptr	None	
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755	
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	
ThinkVantage®	Supports ThinkVantage technologies	
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)	
Preload OS	Genuine Windows® 7 Professional 64	
Preloaded applications	<ul style="list-style-type: none">• Rescue and Recovery®• ThinkVantage System Update• ThinkVantage Toolbox• Norton® Internet Security (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft® Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW model(s) only)• Roxio MyDVD® (DVD±RW model(s) only)• Corel® WinDVD® (DVD or DVD±RW model(s) only)• Ulead® DVD MovieFactory® (Blu-ray model(s) only)	
		<div>SECURITY<ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• USB port disablement (front or all)• Chassis intrusion switch on selected model(s)</div>
		GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
		More compatible accessories, please see O-MAD sheet

See footnotes for important warranty information
US model(s) announced July 19, 2011

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(MAD4-2) July 2011

Type-model	Slot x bay	Processor(s)	GHz	Max Turbo GHz	Memory DIMMs	Disk(s)	Disk size	Pre-conf RAID	SATA optical	Chassis intr switch	Graphics adapter(s)	Global	Win7 preload	Avail date
4263-12U 6x4	1 x	E5507	2.26		3 x 2GB	1x500GB ² SATA	3.5"	No	DVD±RW	Switch		Global	Pro 64	Jun 10
4263-22U 6x4	2 x	E5640	2.66	2.93	6 x 1GB	1x300GB SATA	2.5"	No	DVD±RW	Switch	1 x Quadro NVS450	Global	Pro 64	Jun 10
4263-23U 6x4	2 x	E5620	2.40	2.66	6 x 1GB	1x150GB SATA	2.5"	No	DVD	Switch	1 x Quadro NVS295	Global	Pro 64	Jun 10
4263-67U 6x4	1 x	X5650	2.66	3.06	2 x 2GB	1x500GB SATA	3.5"	No	DVD±RW		1 x Quadro FX380		Pro 64	Jun 10
4263-72U 6x4	2 x	X5650	2.66	3.06	6 x 2GB	1x150GB SATA	2.5"	No	DVD	Switch	2 x Quadro NVS295	Global	Pro 64	Jun 10
4263-79U 6x4	1 x	E5507	2.26		2 x 2GB	1x500GB SATA	3.5"	No	DVD±RW		1 x Quadro FX380		Pro 64	Jun 10
4263-81U 6x4	1 x	E5620	2.40	2.66	2 x 2GB	1x500GB SATA	3.5"	No	DVD±RW		1 x Quadro FX580		Pro 64	Jun 10
4263-82U 6x4	1 x	E5630	2.53	2.80	2 x 2GB	1x500GB SATA	3.5"	No	DVD±RW		1 x Quadro FX1800		Pro 64	Jun 10
4263-97U 6x4	1 x	E5620	2.40	2.66	2 x 2GB	1x500GB SATA	3.5"	No	DVD±RW		1 x Quadro 600	Global	Pro 64	Nov 10
4263-98U 6x4	1 x	E5630	2.53	2.80	2 x 2GB	1x500GB SATA	3.5"	No	DVD±RW		1 x Quadro 2000	Global	Pro 64	Nov 10
4263-99U 6x4	1 x	E5640	2.66	2.93	2 x 2GB	1x500GB SATA	3.5"	No	DVD±RW		1 x Quadro NVS450		Pro 64	Nov 10
4263-A1U 6x4	1 x	E5507	2.26		2 x 2GB	1x160GB SSD	1.8"	No	DVD±RW		2 x Quadro NVS295		Pro 64	Nov 10

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor(s)	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5507 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620, E5630, or E5640 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	Tower <ul style="list-style-type: none"> • Rack-mountable to 3U • Raven black color; metal case • 5.1"W x 17.5"D x 16.8"H • 130mm W x 444mm D x 427mm H • 40.7 lb (18.5kg) max configuration • 24-liter • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit 
Implementation	Two LGA1366 sockets	
Memory	4GB, 6GB, or 12GB std, 24GB max, UDIMM, PC3-10600 1333MHz DDR3**, ECC , 6-channel capable, six 240-pin DIMM sockets*** ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller *** Over three DIMMs requires dual processors	
Graphics	Some: NVIDIA® Quadro® NVS 295 , PCIe x16 adapter, 256MB, two DisplayPort™, 23W Some: NVIDIA Quadro NVS 450 , PCIe x16 adapter, 512MB, four DisplayPort, 35W Some: NVIDIA Quadro FX 380 , PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W Some: NVIDIA Quadro FX 580 , PCIe x16 adapter, 512MB, two DisplayPort, one dual-link DVI-I****, 40W Some: NVIDIA Quadro FX 1800 , PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W Some: NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W **** Only two display connectors are active at a time	
Diskette drive	None	SECURITY <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock) • Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse • USB port disablement (front or all) • Some: Chassis intrusion switch
Media reader	None	
SATA disk(s)	Some: 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5" Some: 150GB or 300GB , SATA 3.0Gb/s, 10000 rpm, 2.5" Some: 160GB Solid State Drive (SSD), SATA 3.0Gb/s, 1.8"	
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max4 Drive	
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s	LIMITED WARRANTY¹ <ul style="list-style-type: none"> ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 800-426-7378
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID ⁸ 0, 1, 5 support	
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O	
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),	
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in	Supports ThinkVantage® technologies
IEEE 1394 adptr	None	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec	LIMITED WARRANTY¹ <ul style="list-style-type: none"> ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 800-426-7378
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755	
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	LIMITED WARRANTY¹ <ul style="list-style-type: none"> ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 800-426-7378
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified	
Cooling	Five fans standard (power supply, first processor, one on front, two on rear) Dual processors model(s): One additional processor fan for second processor	
Rack mount	Rack shelf support or optional sliding rack mount rail kit support	

See footnotes for important warranty information

¹⁴ US models announced November 2, 2010; previous models on June 15, 2010

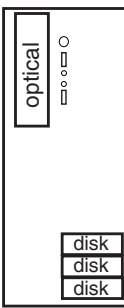
⁸ US models withdrawn effective February, May, June, or September 2011

ThinkStation® C20 (4263) - UDIMM (Windows 7) - February 2011

Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
≧ 4263-A2U	6x4	1xE5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1xFX380	No	Pro 64	02/15/11
4263-A3U	6x4	1xE5645	2.40	6	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1x2000	No	Pro 64	02/15/11
4263-A4U	6x4	1xE5645	2.40	6	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1xNVS 450	No	Pro 64	02/15/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor(s)	Intel® Xeon® Processor E5607 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache Intel Xeon Processor E5645 with six-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache												
Implementation	Two LGA1366 sockets, supports up to two processors												
Memory	24GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, six 240-pin DIMM sockets												
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over three DIMMs requires dual processors 												
Graphics	Some: NVIDIA® Quadro® NVS 450 , PCIe x16 adapter, 512MB, four DisplayPort™, 35W Some: NVIDIA Quadro FX 380 , PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W Some: NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W												
Media reader	None												
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"												
Disk Controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID 0, 1, 5 support												
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O												
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)												
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in												
IEEE 1394 adptr	None												
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec												
Speaker	Internal speaker for business audio												
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755												
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black												
Mouse	Optical Wheel Mouse (USB connector), black												
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified												
ThinkVantage®	Supports ThinkVantage technologies												
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)												
Preload OS	Genuine Windows® 7 Professional 64												
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 												
									Tower  <ul style="list-style-type: none"> • Rack-mountable to 3U • Raven black color; metal case • 5.1"W x 17.5"D x 16.8"H • 130mm W x 444mm D x 427mm H • 40.7 lb (18.5kg) max configuration • 24-liter • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit 				
									Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 3: 3.5", 1" high, internal, opt disk Bay 4: 3.5", 1" high, internal, opt disk Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x16 (x4 electrical) Slot 6: half-length, full-height, 32-bit PCI 2.3 * Adapters >75W use auxiliary power connector(s) from PSU				
									SECURITY <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock) • Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse • USB port disablement (front or all) • Chassis intrusion switch on selected model(s) 				
									GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating More compatible accessories, please see O-MAD sheet				

See footnotes for important warranty information

US models announced February 15, 2011

≧ US model withdrawn effective June 2011

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(MAD2-1) March 2011

ThinkStation® C20 (4263) - UDIMM (Windows 7) - April 2011

Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4263-B3U	6x4	1xX5650	2.66	6	2x2GB	1x500GB SATA	No	DVD±RW	None	1xQuadro 400	No	Pro 64	04/26/11
4263-B4U	6x4	1xE5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	None	1xQuadro 400	No	Pro 64	04/26/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor(s)	Intel® Xeon® Processor E5607 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache Intel Xeon Processor X5650 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache												
Implementation	Two LGA1366 sockets, supports up to two processors												
Memory	24GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, six 240-pin DIMM sockets												
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over three DIMMs requires dual processors 												
Graphics	NVIDIA® Quadro® 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W												
Media reader	None												
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"												
Disk Controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID 0, 1, 5 support												
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O												
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)												
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in												
IEEE 1394 adptr	None												
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec												
Speaker	Internal speaker for business audio												
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755												
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black												
Mouse	Optical Wheel Mouse (USB connector), black												
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified												
ThinkVantage®	Supports ThinkVantage technologies												
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)												
Preload OS	Genuine Windows® 7 Professional 64												
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 												

optical

disk

disk

disk

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 3.5", 1" high, internal, std disk
 Bay 3: 3.5", 1" high, internal, opt disk
 Bay 4: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x16 (x4 electrical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-MAD sheet

ThinkStation® C20 (4263) - UDIMM (Windows 7) - July 2011

Personal Systems Reference(PSREF)

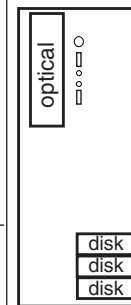
Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4263-B7U	6x4	1xX5650	2.66	6	2x2GB	1x500GB SATA	No	DVD±RW	Switch		Global	Pro 64	07/19/11
4263-B8U	6x4	1xX5660	2.80	6	2x2GB	1x500GB SATA	No	DVD±RW	Switch	1xQuadro 600	Global	Pro 64	07/19/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- Microsoft Office 2010 Product Key Ready (O10PKR)

Processor(s)	Intel® Xeon® Processor X5650 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor X5660 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache
Implementation	Two LGA1366 sockets, supports up to two processors
Memory	24GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, six 240-pin DIMM sockets
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over three DIMMs requires dual processors
Graphics	Some: NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W
Media reader	None
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"
Disk Controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID 0, 1, 5 support
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in
IEEE 1394 adptr	None
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec
Speaker	Internal speaker for business audio
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified
ThinkVantage®	Supports ThinkVantage technologies
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)

Preload OS	Genuine Windows® 7 Professional 64
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only)

Tower



- Rack-mountable to 3U
- Raven black color; metal case
- 5.1"W x 17.5"D x 16.8"H
- 130mm W x 444mm D x 427mm H
- 40.7 lb (18.5kg) max configuration
- 24-liter
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 3.5", 1" high, internal, std disk
 Bay 3: 3.5", 1" high, internal, opt disk
 Bay 4: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x16 (x4 electrical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-MAD sheet

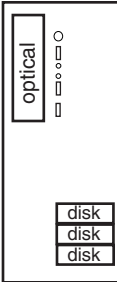
Type-model	Slot x bay	Processor(s)	GHz	Max Turbo GHz	Memory DIMMs	Disk(s)	Disk size	Pre-conf RAID	SATA optical	Chassis intr switch	Graphics adapter(s)	Global	Win7 preload	Avail date
4263-61U 6x4	1 x	E5620	2.40	2.66	2 x 2GB	1x150GB ²	SATA 2.5"	No	DVD±RW	Switch		Global	Pro 64	Jun 10
4263-63U 6x4	1 x	X5650	2.66	3.06	1 x 4GB	1x150GB	SATA 2.5"	No	DVD±RW	Switch		Global	Pro 64	Jun 10
4263-71U 6x4	2 x	E5620	2.40	2.66	6 x 2GB	1x250GB	SATA 3.5"	No	DVD	Switch	2xQuadro NVS295	Global	Pro 64	Jun 10

- **High performance workstation with smallest-possible form factor**
- **Environmentally friendly, cool, and quiet with rock solid engineering**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor(s)	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5620 with quad-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache		Tower <ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit <div><div>optical</div><div>disk</div><div>disk</div><div>disk</div></div> <div>Bay ① 5.25", 1.6" high, external, std optical</div> <div>Bay ② 3.5", 1" high, internal, std disk</div> <div>Bay ③ 3.5", 1" high, internal, opt disk</div> <div>Bay ④ 3.5", 1" high, internal, opt disk</div> <div>Slot 1: half-length, full-height, PCIe x1</div> <div>Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)</div> <div>Slot 3: full-length, full-height, 32-bit PCI 2.3</div> <div>Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)</div> <div>Slot 5: full-length, full-height, PCIe x16 (x4 electrical)</div> <div>Slot 6: half-length, full-height, 32-bit PCI 2.3</div> <div>* Adapters >75W use auxiliary power connector(s) from PSU</div>	
Implementation	Two LGA1366 sockets			
Memory	4GB or 12GB std, 96GB max (Pending availability of 16GB RDIMM), RDIMM, PC3-10600 1333MHz DDR3**, ECC , 6-channel capable, six 240-pin DIMM sockets*** ** System automatically clocks down for processors with 1066MHz DDR3 memory controller *** Over three DIMMs requires dual processors			
Graphics	<i>Some:</i> NVIDIA® Quadro® NVS 295 , PCIe x16 adapter, 256MB, two DisplayPort, 23W			
Diskette drive	None			
Media reader	None			
SATA disk(s)	<i>Some:</i> 250GB , SATA 3.0Gb/s, 7200 rpm, 3.5" <i>Some:</i> 150GB , SATA 3.0Gb/s, 10000 rpm, 2.5"			
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s			
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, one SATA connector for optical, RAID [®] 0, 1, 5 support			
Chipset	Intel 5520 Chipset , Intel ICH10R, Winbond® W83627DHG-P Super I/O		SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• USB port disablement (front or all)• Chassis intrusion switch	
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm),			
Rear ports	Eight USB 2.0, eSATA, one ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in			
IEEE 1394 adptr	None			
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755			
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified			
Cooling	Five fans standard (power supply, first processor, one on front, two on rear) <i>Dual processors model(s):</i> One additional processor fan for second processor <i>4GB RDIMM model(s):</i> One additional memory fan for single processor model(s), Two additional memory fans for dual processors model(s)			
Rack mount	Rack shelf support or optional sliding rack mount rail kit support		Supports ThinkVantage® technologies	
Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64		Accessories 2GB PC3-10600 DDR3 ECC RDIMM 57Y4425 4GB PC3-10600 DDR3 ECC RDIMM 57Y4426 Blu-ray™ Burner SATA 1.5Gb/s 45K1675 ThinkVision® L2440p Wide 24" Monitor 4420HB2 More accessories on O-MAD sheet		GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Norton™ Internet Security (30 days of virus definitions)• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Corel® WinDVD® (DVD±RW)		Other accessories at lenovo.com/accessories		LIMITED WARRANTY¹ <ul style="list-style-type: none">⇨ 3-year parts and labor⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇨ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty⇨ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 800-426-7378

See footnotes for important warranty information
US models announced June 15, 2010

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(MAD1-2) June 2010

Type-model	Slot x bay	Processor(s)	GHz	Max Turbo GHz	Memory DIMMs	Memory type	Disk(s)	Disk size	Pre-conf RAID	1394 adptr	Chassis intr switch	Graphics adapter(s)	Win7 preload	Global	Avail date	
4272-35U 6x4	1 x	E5630	2.53	2.80	2 x 2GB	UDIMM	1x300GB ² SAS	3.5"	No	1394	None	1 x FX1800	Pro 64		Jun 10	
4272-41U 6x4	1 x	E5630	2.53	2.80	2 x 2GB	UDIMM	1x300GB SAS	3.5"	No		None	1 x 2000	Pro 64	Global	Nov 10	
4272-42U 6x4	1 x	X5650	2.66	3.06	3 x 2GB	UDIMM	1x300GB SAS	3.5"	No		None	1 x 2000	Pro 64		Nov 10	
<ul style="list-style-type: none">• High performance workstation with smallest-possible form factor• Environmentally friendly, cool, and quiet with rock solid engineering• These small and medium business (SMB) models are part of the US TopSeller™ Program• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																
Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5630 with quad-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache Two LGA1366 sockets									Tower <ul style="list-style-type: none">• Rack-mountable to 3U• Raven black color; metal case• 5.1"W x 17.5"D x 16.8"H• 130mm W x 444mm D x 427mm H• 40.7 lb (18.5kg) max configuration• 24-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit 						
Implementation										Bay ① 5.25", 1.6" high, external, std optical Bay ② 3.5", 1" high, internal, std disk Bay ③ 3.5", 1" high, internal, opt disk Bay ④ 3.5", 1" high, internal, opt disk						
Memory	4GB or 6GB std, 48GB max, UDIMM, PC3-10600 1333MHz DDR3** , ECC , 6-channel capable, twelve 240-pin DIMM sockets*** ** System automatically clocks down for processors with 1066MHz DDR3 memory controller *** Over six DIMMs requires dual processors									Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x16 (x4 electrical) Slot 6: half-length, full-height, 32-bit PCI 2.3 * Adapters >75W use auxiliary power connector(s) from PSU						
Graphics	<i>Some: NVIDIA® Quadro® FX 1800</i> , PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W <i>Some: NVIDIA Quadro 2000</i> , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W **** Only two display connectors are active at a time															
Diskette drive	None															
Media reader	None															
SATA disk(s)	300GB , SAS 3.0Gb/s, 15000 rpm, 3.5"															
SATA DVD±RW	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s															
Disk controller	3 SATA connectors for optical, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID ⁵ 0, 1, 5, integrated in Marvell® 88SE6480															
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O															
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)															
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in															
IEEE 1394 adptr	<i>Some: FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear</i>															
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec															
Speaker	Internal speaker for business audio															
Ethernet	Two gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754															
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black															
Mouse	Optical Wheel Mouse (USB connector), black															
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified															
Cooling	Five fans standard (power supply, first processor, one on front, two on rear)															
Rack mount	Rack shelf support or optional sliding rack mount rail kit support															
Preloaded operating system²⁰					Accessories											
- Genuine Windows® 7 Professional 64					2GB PC3-10600 DDR3 ECC UDIMM					43R2033						
Preloaded applications⁵ (only some listed)					4GB PC3-10600 DDR3 ECC UDIMM					57Y4138						
• Rescue and Recovery™					Blu-ray™ Burner SATA 1.5Gb/s					45K1675						
• ThinkVantage Toolbox					ThinkVision® L2440p Wide 24" Monitor					4420HB2						
• Norton™ Internet Security (30 days of virus definitions)					More accessories on O-MAD sheet											
• Adobe® Reader®					Other accessories at lenovo.com/accessories											
• Adobe Flash® Player																
• Microsoft Office 2010 preloaded; purchase product key to activate																
• Roxio MyDVD® (DVD±RW)																
• Corel® WinDVD® (DVD±RW)																
SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• Serial port I/O control• USB port disablement (front or all)																
Supports ThinkVantage® technologies																
GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating																
LIMITED WARRANTY¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 800-426-7378																

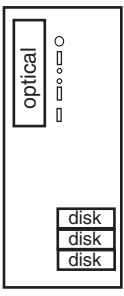
See footnotes for important warranty information

US models announced November 2, 2010; previous model on June 15, 2010

US models withdrawn effective February or May 2011

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(MAD1-9) November 2010

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	1394 adptr	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4272-43U	6x4	1xE5645	2.40	6	2x2GB	1x300GB SAS	No	1394	DVD±RW	Switch	1x2000	No	Pro 64	02/15/11
<ul style="list-style-type: none"> • High performance workstation with smallest-possible form factor • Environmentally friendly, cool, and quiet with rock solid engineering • This small and medium business (SMB) model is part of the US TopSeller™ Program • This system is Microsoft Office 2010 Product Key Ready (O10PKR) 														
Processor(s)	Intel® Xeon® Processor E5645 with six-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache													
Implementation	Two LGA1366 sockets, supports up to two processors													
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, twelve 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 													
Graphics	NVIDIA® Quadro® 2000 , PCIe x16 adapter, 1GB, two DisplayPort™, one dual-link DVI-I, 62W													
Media reader	None													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Hard drive(s)	300GB, SAS 3.0Gb/s, 15000 rpm, 3.5"													
Disk Controller	3 SATA connectors for optical, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, integrated in Marvell® 88SE6480													
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)													
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in													
IEEE 1394 adptr	FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear													
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec													
Speaker	Internal speaker for business audio													
Ethernet	Two gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754													
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 													
Tower 										<ul style="list-style-type: none"> • Rack-mountable to 3U • Raven black color; metal case • 5.1"W x 17.5"D x 16.8"H • 130mm W x 444mm D x 427mm H • 40.7 lb (18.5kg) max configuration • 24-liter • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit 				
Bay 1: 5.25", 1.6" high, external, std optical Bay 2: 3.5", 1" high, internal, std disk Bay 3: 3.5", 1" high, internal, opt disk Bay 4: 3.5", 1" high, internal, opt disk										Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x16 (x4 electrical) Slot 6: half-length, full-height, 32-bit PCI 2.3				
* Adapters >75W use auxiliary power connector(s) from PSU										SECURITY <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock) • Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse • USB port disablement (front or all) • Chassis intrusion switch on selected model(s) 				
GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating										More compatible accessories, please see O-MAD sheet				

ThinkStation® C20x (4272) - TopSeller (Windows 7) - July 2011

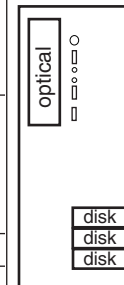
Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	1394 adptr	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4272-52U	6x4	1xE5620	2.40	4	2x2GB	1x450GB SAS	No	None	DVD±RW	Switch	None	No	Pro 64	07/19/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- Part of the US TopSeller™ Program
- Microsoft Office 2010 Product Key Ready (O10PKR)

Processor(s)	Intel® Xeon® Processor E5620 with quad-core, 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache													
Implementation	Two LGA1366 sockets, supports up to two processors													
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, twelve 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 													
Graphics	None													
Media reader	None													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Hard drive(s)	450GB, SAS 3.0Gb/s, 15000 rpm, 3.5"													
Disk Controller	3 SATA connectors for optical, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁺ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, integrated in Marvell® 88SE6480													
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)													
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in													
IEEE 1394 adptr	None													
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec													
Speaker	Internal speaker for business audio													
Ethernet	Two gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754													
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 													

Tower



- Rack-mountable to 3U
- Raven black color; metal case
- 5.1"W x 17.5"D x 16.8"H
- 130mm W x 444mm D x 427mm H
- 40.7 lb (18.5kg) max configuration
- 24-liter
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 3.5", 1" high, internal, std disk
 Bay 3: 3.5", 1" high, internal, opt disk
 Bay 4: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x16 (x4 electrical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

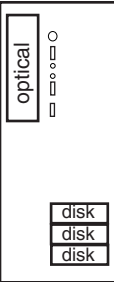
- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-MAD sheet

Type-model	Slot x bay	Processor(s)	GHz	Max Turbo GHz	Memory DIMMs	Disk(s)	Disk size	Pre-conf RAID	1394 adptr	SATA optical	Chassis intr switch	Graphics adapter(s)	Global	Avail date
4269-11U 6x4	1 x	E5640	2.66	2.93	2 x 2GB	1x300GB ² SAS	3.5"	No	1394	DVD±RW		1 x Quadro FX1800		Jun 10
4269-12U 6x4	1 x	E5507	2.26		2 x 2GB	1x300GB SAS	3.5"	No	1394	DVD±RW		1 x Quadro FX1800		Jun 10
4269-13U 6x4	1 x	X5650	2.66	3.06	2 x 2GB	1x300GB SAS	3.5"	No	1394	DVD±RW		1 x Quadro FX580		Jun 10
4269-17U 6x4	2 x	X5667	3.06	3.46	6 x 2GB	1x450GB SAS	3.5"	No		DVD±RW	Switch		Global	Jun 10
4269-19U 6x4	2 x	X5677	3.46	3.73	6 x 2GB	1x300GB SAS	3.5"	No		DVD±RW	Switch		Global	Jun 10
4269-21U 6x4	2 x	X5650	2.66	3.06	6 x 2GB	1x300GB SAS	3.5"	No		DVD±RW	Switch		Global	Jun 10
4269-22U 6x4	2 x	E5640	2.66	2.93	6 x 2GB	1x300GB SAS	3.5"	No		DVD±RW	Switch		Global	Jun 10
4269-68U 6x4	1 x	E5640	2.66	2.93	2 x 2GB	1x300GB SAS	3.5"	No		DVD±RW		1 x Quadro 2000		Nov10
4269-69U 6x4	1 x	E5507	2.26		2 x 2GB	1x300GB SAS	3.5"	No		DVD±RW		1 x Quadro 2000		Nov10
4269-71U 6x4	1 x	X5650	2.66	3.06	2 x 2GB	1x300GB SAS	3.5"	No		DVD±RW		1 x Quadro 600		Nov10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor(s)	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5507 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5640 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5667 or X5677 with quad-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	Tower	
Implementation	Two LGA1366 sockets	<ul style="list-style-type: none"> • Rack-mountable to 3U • Raven black color; metal case • 5.1"W x 17.5"D x 16.8"H • 130mm W x 444mm D x 427mm H • 40.7 lb (18.5kg) max configuration • 24-liter • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit 	
Memory	4GB or 12GB std, 48GB max, UDIMM, PC3-10600 1333MHz DDR3**, ECC , 6-channel capable, twelve 240-pin DIMM sockets*** ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller *** Over six DIMMs requires dual processors	Bay ① 5.25", 1.6" high, external, std optical Bay ② 3.5", 1" high, internal, std disk Bay ③ 3.5", 1" high, internal, opt disk Bay ④ 3.5", 1" high, internal, opt disk Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x16 (x4 electrical) Slot 6: half-length, full-height, 32-bit PCI 2.3 * Adapters >75W use auxiliary power connector(s) from PSU	
Graphics	<i>Some: NVIDIA® Quadro® FX 580</i> , PCIe x16 adapter, 512MB, two DisplayPort™, one dual-link DVI-I****, 40W <i>Some: NVIDIA Quadro FX 1800</i> , PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W <i>Some: NVIDIA Quadro 600</i> , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W <i>Some: NVIDIA Quadro 2000</i> , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W **** Only two display connectors are active at a time		
Diskette drive	None		
Media reader	None		
SATA disk(s)	300GB or 450GB , SAS 3.0Gb/s, 15000 rpm, 3.5"		
SATA DVD±RW	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s		
Disk controller	3 SATA connectors for optical, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID ⁵ 0, 1, 5, integrated in Marvell® 88SE6480		
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O		
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)		
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in		
IEEE 1394 adptr	<i>Some: FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear</i>		
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec		
Speaker	Internal speaker for business audio		
Ethernet	Two gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754		
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black		
Mouse	Optical Wheel Mouse (USB connector), black		
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified		
Cooling	Five fans standard (power supply, first processor, one on front, two on rear) <i>Dual processors model(s):</i> One additional processor fan for second processor		
Rack mount	Rack shelf support or optional sliding rack mount rail kit support		
Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64		Preloaded applications⁵ (only some listed) • Microsoft Office 2010 preloaded; purchase product key to activate	
		SECURITY <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock) • Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement (front or all) • <i>Some:</i> Chassis intrusion switch 	
		Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating	
		LIMITED WARRANTY¹ ➤ 3-year parts and labor ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty ➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 800-426-7378	

See footnotes for important warranty information

Ⓜ US models announced November 2, 2010; previous models on June 15, 2010

ⓧ US models withdrawn effective February or May 2011

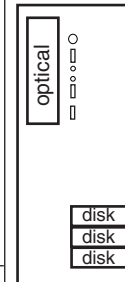
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(MAD1-5) November 2010

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	1394 adptr	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4269-72U	6x4	1xX5687	3.6	4	2x2GB	1x300GB SAS	No	No	DVD±RW	Switch		No	Pro 64	02/15/11
4269-73U	6x4	1xX5647	2.93	4	2x2GB	1x300GB SAS	No	No	DVD±RW	Switch	1x600	No	Pro 64	02/15/11
4269-74U	6x4	1xX5647	2.93	4	2x2GB	1x300GB SAS	No	No	DVD±RW	Switch	1x2000	No	Pro 64	02/15/11
4269-75U	6x4	1xE5607	2.26	4	2x2GB	1x300GB SAS	No	No	DVD±RW	Switch	1x2000	No	Pro 64	02/15/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor(s)	Intel® Xeon® Processor E5607 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache Intel Xeon Processor X5647 with quad-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor X5687 with quad-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache													
Implementation	Two LGA1366 sockets, supports up to two processors													
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, twelve 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 													
Graphics	Some: NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W													
Media reader	None													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Hard drive(s)	300GB, SAS 3.0Gb/s, 15000 rpm, 3.5"													
Disk Controller	3 SATA connectors for optical, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, integrated in Marvell® 88SE6480													
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)													
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in													
IEEE 1394 adptr	None													
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec													
Speaker	Internal speaker for business audio													
Ethernet	Two gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754													
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 													

Tower



- Rack-mountable to 3U
- Raven black color; metal case
- 5.1"W x 17.5"D x 16.8"H
- 130mm W x 444mm D x 427mm H
- 40.7 lb (18.5kg) max configuration
- 24-liter
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 3.5", 1" high, internal, std disk
 Bay 3: 3.5", 1" high, internal, opt disk
 Bay 4: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x16 (x4 electrical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

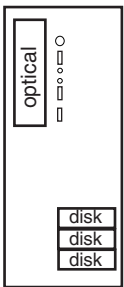
More compatible accessories, please see O-MAD sheet

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	1394 adptr	SATA optical	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Announce date (mm/dd/yy)
4269-87U	6x4	1xE5620	2.40	4	2x2GB	1x450GB SAS	No	No	DVD±RW	Switch	1xQuadro 400	Global	Pro 64	07/19/11
4269-88U	6x4	1xX5660	2.80	6	2x2GB	1x450GB SAS	No	No	DVD±RW	Switch			Pro 64	07/19/11
4269-89U	6x4	1xX5660	2.80	6	2x2GB	1x450GB SAS	No	No	DVD±RW	Switch	1xQuadro 4000		Pro 64	07/19/11

- High performance workstation with smallest-possible form factor
- Environmentally friendly, cool, and quiet with rock solid engineering
- Microsoft Office 2010 Product Key Ready (O10PKR)

Processor(s)	Intel® Xeon® Processor E5620 with quad-core, 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor X5660 with six-core, 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache													
Implementation	Two LGA1366 sockets, supports up to two processors													
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable, twelve 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 													
Graphics	Some: NVIDIA® Quadro® 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W Some: NVIDIA Quadro 4000 , PCIe x16 adapter, 2GB, two DisplayPort, one dual-link DVI-I, one stereo, 142W													
Media reader	None													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Hard drive(s)	450GB, SAS 3.0Gb/s, 15000 rpm, 3.5"													
Disk Controller	3 SATA connectors for optical, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, integrated in Marvell® 88SE6480													
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)													
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in													
IEEE 1394 adptr	None													
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec													
Speaker	Internal speaker for business audio													
Ethernet	Two gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754													
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	800 watts with 80mm side-mounted variable speed fan, universal, Climate Savers® Computing Gold, 80 PLUS® Gold qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 													

Tower



- Rack-mountable to 3U
- Raven black color; metal case
- 5.1"W x 17.5"D x 16.8"H
- 130mm W x 444mm D x 427mm H
- 40.7 lb (18.5kg) max configuration
- 24-liter
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 3.5", 1" high, internal, std disk
 Bay 3: 3.5", 1" high, internal, opt disk
 Bay 4: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x16 (x4 electrical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-MAD sheet

Memory Loading Notes on ThinkStation C20

System memory speed on ThinkStation C20 will be determined by a number of factors, including the microprocessor model and the type, speed, size (capacity), and number of DIMMs installed. Refer to the following table for information on the supported system memory speed for your ThinkStation model.

- ThinkStation C20 has six memory slots; divided into two sets of 3-DIMM memory slots
- Memory controller is integrated in processor
- ThinkStation C20 has 2 processor slots, each processor control three DIMMs
- Over three DIMMs requires dual processor
- ThinkStation C20 supports UDIMM and RDIMM, mixing of UDIMM and RDIMM is not supported

Memory Speed Table for ThinkStation C20

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)	PC3-8500 UDIMM (1GB, 2GB, 4GB)	PC3-10600 RDIMM (1GB, 2GB, 4GB, 8GB)	PC3-8500 RDIMM (1GB, 2GB, 4GB)	PC3-8500 RDIMM (8GB, 16GB)
Amount of DIMMs installed per CPU bank	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3
CPU Model	Actual Memory Speed				
Intel® Xeon® E5502	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5503	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5504	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5506	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5507	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5520	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5530	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5540	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5620	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5630	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5640	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon X5550	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5560	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5570	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5650	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5660	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5667	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5670	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5677	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5680	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon W5580	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon W5590	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz

For more information on ThinkStation C20 processor and memory accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkstationaccessories

Memory Speed Table for ThinkStation C20

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)	PC3-8500 UDIMM (1GB, 2GB, 4GB)	PC3-10600 RDIMM (1GB, 2GB, 4GB, 8GB)	PC3-8500 RDIMM (1GB, 2GB, 4GB)	PC3-8500 RDIMM (8GB, 16GB)
Amount of DIMMs installed per CPU bank	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3
CPU Model	Actual Memory Speed				
Intel® Xeon® E5603	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5606	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5607	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz
Intel Xeon E5645	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon E5649	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5672	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz
Intel Xeon X5675	1333MHz	1066MHz	1333MHz	1066MHz	1066MHz

For more information on ThinkStation C20 processor and memory accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkstationaccessories

Memory Loading Notes on ThinkStation C20x

System memory speed on ThinkStation C20x will be determined by a number of factors, including the microprocessor model and the type, speed, size (capacity), and number of DIMMs installed. Refer to the following table for information on the supported system memory speed for your ThinkStation model.

- ThinkStation C20x has twelve memory slots; divided into two sets of 6-DIMM memory slots
- Memory controller is integrated in processor
- ThinkStation C20x has 2 processor slots, each processor control six DIMMs
- Over six DIMMs requires dual processor
- ThinkStation C20x supports UDIMM and RDIMM, mixing of UDIMM and RDIMM is not supported

Memory Speed Table for ThinkStation C20x

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)		PC3-8500 UDIMM (1GB, 2GB)	PC3-10600 RDIMM (2GB, 4GB, 8GB)		PC3-8500 RDIMM (1GB, 2GB, 4GB)	PC3-8500 RDIMM (8GB)	
Amount of DIMMs installed per CPU bank	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6
CPU Model	Actual Memory Speed							
Intel® Xeon® E5502	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5503	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5504	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5506	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5507	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5520	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5530	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5540	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5620	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5630	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5640	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5550	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5560	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5570	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5650	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5660	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5667	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5670	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5677	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5680	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon W5580	1333MHz	1066MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon W5590	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz

For more information on ThinkStation C20x processor and memory accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkstationaccessories

Memory Speed Table for ThinkStation C20x

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)		PC3-8500 UDIMM (1GB, 2GB)	PC3-10600 RDIMM (2GB, 4GB, 8GB)		PC3-8500 RDIMM (1GB, 2GB, 4GB)	PC3-8500 RDIMM (8GB)	
Amount of DIMMs installed per CPU bank	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6
CPU Model	Actual Memory Speed							
Intel® Xeon® E5603	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5606	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5607	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5645	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5649	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5647	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5672	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5675	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5687	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5690	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz

For more information on ThinkStation D20 processor and memory accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkstationaccessories

Partial list of accessories supported on ThinkStation C20 and C20x

Processors⁵⁵

Intel® Xeon® Quad-Core Processor E5606	0A36531	ann	05/24/11
Intel Xeon Quad-Core Processor E5607	0A36532	ann	05/24/11
Intel Xeon Six-Core Processor E5645	0A36533	ann	05/24/11
Intel Xeon Six-Core Processor E5649	0A36534	ann	05/24/11

⁵⁵ Additional processor must match the existing processor

Memory⁵³

2GB PC3-10600 DDR3 ECC UDIMM ⁵⁴	43R2033	ann	03/31/09
4GB PC3-10600 DDR3 ECC UDIMM ⁵⁴	57Y4138	ann	08/04/09
2GB PC3-10600 DDR3 ECC RDIMM ⁵⁴	57Y4425	ann	04/13/10
4GB PC3-10600 DDR3 ECC RDIMM ⁵⁴	57Y4426	ann	04/13/10
8GB PC3-10600 DDR3 ECC RDIMM ⁵⁴	57Y4427	ann	04/13/10

⁵³ Mixing of UDIMM and RDIMM is not supported

⁵⁴ Actual memory operating speed is the lowest installed speed, dependent on processor memory bus speed and PC3-8500 / PC3-10600 installed configuration

More information on memory and processor configuration, operation and limitation, please visit:

www.lenovo.com/support/thinkstationaccessories

Optical

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann	09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann	08/23/11
Blu-ray™ Burner SATA 1.5Gb/s	45K1675	ann	03/31/09

Storage and removable storage

C20, C20x preconfigured with SATA disks:

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann	01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann	11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann	08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann	03/31/09

C20x preconfigured with SAS disks:

450GB SAS 3.0Gb/s Disk (15000 rpm)	43N3424	ann	02/02/10
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All:

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08

Keyboard

Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

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

Monitors

ThinkVision®:

L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

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

Monitor accessories⁴⁶

ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

Graphics

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable ⁵⁰	0A36537	ann	09/13/11
NVIDIA® Quadro® 256MB NVS 295	45K1669	ann	04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59 ⁶⁵	0A36528	ann	04/26/11
NVIDIA Quadro 512MB NVS 450	57Y4398	ann	01/19/10
NVIDIA Quadro 512MB 400	0A36535	ann	06/28/11
NVIDIA Quadro 1GB 600	0A36183	ann	10/26/10
NVIDIA Quadro 1GB 2000	57Y4479	ann	10/26/10
NVIDIA Quadro 1GB 2000D	0A36541	ann	11/01/11
NVIDIA Quadro 2GB 4000	57Y4480	ann	10/26/10
NVIDIA Quadro 2.5GB 5000	57Y4481	ann	10/26/10
NVIDIA SLI Connector ⁶⁰	55Y8963	ann	03/31/09

⁵⁰ Attaches to selected DisplayPort graphics cards.

⁶⁰ Compatible to Quadro 5000.

⁶⁵ Contains DMS59 to dual-DVI cable and DMS59 to dual-VGA cable.

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

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

Rack mount accessories

ThinkStation C-Series, D-Series Rail Kit	57Y4482	ann	09/14/10
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For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkStation S20



Lenovo ThinkStation S20



Lenovo ThinkStation S20



Lenovo ThinkStation S20 (left)
Lenovo ThinkStation D20 (right)



Lenovo ThinkStation Graphics Card Option
NVIDIA® Quadro® 2GB 4000 (57Y4480)*

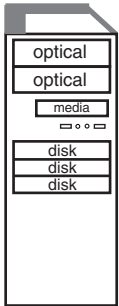


Lenovo ThinkStation Graphics Card Option
NVIDIA Quadro 2.5GB 5000 (57Y4481)

* NVIDIA Quadro 2GB 4000 (57Y4480) option packaging contains one 3D stereo bracket

Name	Type-model	Slot x bay	Processor	GHz	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-config RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptr	ENERGY STAR 5.0	Win7 preload	Avail date
☞ S20	4105-97U	5x6	W3503	2.40	2x1GB	1333MHz	1x500GB ²	3.5"	No	DVD±RW	Media	1xFX380	No	Pending	Pro64	Oct 09
☞ S20	4105-98U	5x6	W3505	2.53	2x1GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1xFX580	No	Pending	Pro64	Oct 09
☞ S20	4105-99U	5x6	W3520	2.66	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1xFX1800	No	Pending	Pro64	Oct 09
☞ S20	4105-P5U	5x6	E5507	2.26	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1xFX380	No	Pending	Pro64	Oct 10
☞ S20	4105-P6U	5x6	W3550	3.06	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1xFX580	No	Pending	Pro64	Oct 10
☞ S20	4105-P7U	5x6	W3530	2.80	1x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1x2000	No	Pending	Pro64	Oct 10
☞ S20	4105-P3U	5x6	E5507	2.26	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1x2000	No	Pending	Pro64	Oct 10
☞ S20	4105-P4U	5x6	W3530	2.80	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1x2000	No	Pending	Pro64	Oct 10
☞ S20	4105-R9U	5x6	W3550	3.06	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1x2000	No	Pending	Pro64	Nov 10
☞ S20	4105-O1U	5x6	W3550	3.06	1x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media		No	Pending	Pro64	Nov 10
☞ S20	4105-O2U	5x6	W3505	2.53	1x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1x600	No	Pending	Pro64	Nov 10
☞ S20	4105-O3U	5x6	W3550	3.06	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1x600	No	Pending	Pro64	Nov 10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor W3503 or W3505 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor W3520, W3530, or W3550 with quad-core, 4.8GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor E5507 with quad-core, 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache			Tower <ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 19.0"D x 18.8"H (with handle)• 175mm W x 483mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support																	
Implementation	One LGA1366 socket																				
Memory	2GB or 4GB std, 48GB max, UDIMM, PC3-10600 1333MHz DDR3*** ECC, 3-channel capable, six 240-pin DIMM sockets *** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller			Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, open Bay ③ 3.5", 1" high, external, std media reader Bay ④ 3.5", 1" high, internal, std disk Bay ⑤ 3.5", 1" high, internal, opt disk Bay ⑥ 3.5", 1" high, internal, opt disk Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 2: full-length, full-height, PCIe 2.0 x4** Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 4: full-length, full-height, PCIe x1 Slot 5: half-length, full-height, 32-bit PCI 2.3 ** x16 mechanical																	
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU Some: NVIDIA® Quadro® FX 380, PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W Some: NVIDIA Quadro FX 580, PCIe x16 adapter, 512MB, two DisplayPort, one dual-link DVI-I****, 40W Some: NVIDIA Quadro FX 1800, PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000, PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W **** Only two display connectors are active at a time																				
Media reader	20-in-1 media reader, internal USB 2.0			SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all) Supports ThinkVantage® technologies																	
SATA disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"																				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																				
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals																				
Chipset	Intel X58 Express Chipset, Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O																				
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)			GREENGUARD® certified RoHS-compliant Pending: ENERGY STAR® 5.0-compliant EPEAT™ Gold rating																	
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in																				
IEEE 1394 adptr	None																				
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec																				
Speaker	Internal speaker for business audio			LIMITED WARRANTY¹ <ul style="list-style-type: none">☞ 3-year parts and labor☞ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)☞ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services☞ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																	
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755																				
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant																				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black																				
Mouse	Optical Wheel Mouse (USB connector), black																				
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified																				
Cooling	3 to 5 fans (power supply, CPU, rear, opt front PCI [>75W graphics], opt front [SAS])																				
Rack mount	Rack shelf support																				
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 64 Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Norton Internet Security™ (30 days of virus definitions)• Microsoft Office 2010 preloaded; purchase product key to activate				Accessories <table><tr><td>2GB PC3-10600 DDR3 ECC UDIMM</td><td>43R2033</td></tr><tr><td>4GB PC3-10600 DDR3 ECC UDIMM</td><td>57Y4138</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Blu-ray™ Burner SATA 1.5Gb/s</td><td>45K1675</td></tr><tr><td>ThinkVision® L2440p Wide 24" Monitor</td><td>4420HB2</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>				2GB PC3-10600 DDR3 ECC UDIMM	43R2033	4GB PC3-10600 DDR3 ECC UDIMM	57Y4138	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Blu-ray™ Burner SATA 1.5Gb/s	45K1675	ThinkVision® L2440p Wide 24" Monitor	4420HB2	Other accessories at lenovo.com/accessories			
2GB PC3-10600 DDR3 ECC UDIMM	43R2033																				
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ThinkVision® L2440p Wide 24" Monitor	4420HB2																				
Other accessories at lenovo.com/accessories																					

See footnotes for important warranty information

☞ US models announced October 26 or November 2, 2010; previous models on October 22, 2009 or October 12, 2010

☞ US models withdrawn effective August, December 2010 or February, May, June 2011

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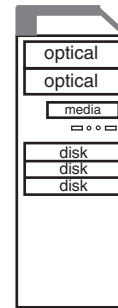
(SEV3-2) November 2010

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
≧ 4105-1JU	5x6	E5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	No	Media	Switch	1xFX380	No	Pro 64	02/15/11
4105-1KU	5x6	E5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	No	Media	Switch	1x2000	No	Pro 64	02/15/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor E5607 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache														
Implementation	One LGA1366 socket														
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 3-channel capable, six 240-pin DIMM sockets														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 														
Graphics	Some: NVIDIA® Quadro FX® 380 , PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W Some: NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort™, one dual-link DVI-I, 62W														
Media reader	Media card reader, internal USB 2.0														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals														
SAS controller	None														
Chipset	Intel X58 Express Chipset , Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O														
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)														
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in														
IEEE 1394 adptr	None														
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755														
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black														
Mouse	Optical Wheel Mouse (USB connector), black														
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified														
ThinkVantage®	Supports ThinkVantage technologies														
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)														
Preload OS	Genuine Windows® 7 Professional 64														
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 														

Tower



- Raven black color; metal case
- 6.9"W x 19.0"D x 18.8"H (with handle)
- 175mm W x 483mm D x 478mm H
- 38.5 lb (17.5kg) max configuration
- 31-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1: 5.25"	1.6" high,	external,	std optical
Bay 2: 5.25"	1.6" high,	external,	open
Bay 3: 3.5"	1" high,	external,	std media reader
Bay 4: 3.5"	1" high,	internal,	std disk
Bay 5: 3.5"	1" high,	internal,	opt disk
Bay 6: 3.5"	1" high,	internal,	opt disk

Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 2: full-length, full-height, PCIe 2.0 x4**
 Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 4: full-length, full-height, PCIe x1
 Slot 5: half-length, full-height, 32-bit PCI 2.3

- * Adapters >75W use auxiliary power connector(s) from PSU
 ** x16 mechanical

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-SEV sheet

See footnotes for important warranty information

US models announced February 15, 2011

≧ US model withdrawn effective June 2011

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 (SEV8-2) February 2011

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4105-2EU	5x6	E5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	No	Media	None	1xQuadro 400	No	Pro 64	04/26/11
4105-2FU	5x6	W3503	2.40	2	1x2GB	1x500GB SATA	No	DVD±RW	No	Media	None	1xQuadro 400	No	Pro 64	04/26/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

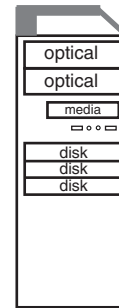
Processor	Intel® Xeon® Processor W3503 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache Intel® XeonProcessor E5607 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache										<div><div>Tower</div><div><div><div>optical</div><div>optical</div><div>media</div><div>disk</div><div>disk</div><div>disk</div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 19.0"D x 18.8"H (with handle)• 175mm W x 483mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support</div></div>									
Implementation	One LGA1366 socket																			
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 3-channel capable, six 240-pin DIMM sockets																			
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed																			
Graphics	NVIDIA® Quadro® 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W																			
Media reader	Media card reader, internal USB 2.0																			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"																			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals																			
Chipset	Intel X58 Express Chipset , Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O																			
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)																			
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in																			
IEEE 1394 adptr	None																			
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec																			
Speaker	Internal speaker for business audio																			
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755																			
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black																			
Mouse	Optical Wheel Mouse (USB connector), black																			
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified																			
ThinkVantage®	Supports ThinkVantage technologies																			
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)																			
Preload OS	Genuine Windows® 7 Professional 64																			
Preloaded applications	<ul style="list-style-type: none">• Rescue and Recovery®• ThinkVantage System Update• ThinkVantage Toolbox• Norton® Internet Security (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft® Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW model(s) only)• Roxio MyDVD® (DVD±RW model(s) only)• Corel® WinDVD® (DVD and DVD±RW model(s) only)• Ulead® DVD MovieFactory® (Blu-ray model(s) only)																			
										<div><div>SECURITY</div><div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• USB port disablement (front or all)• Chassis intrusion switch on selected model(s)</div></div>										
										<div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div>										
										More compatible accessories, please see O-SEV sheet										

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4105-3AU	5x6	W3503	2.40	2	1x2GB	1x500GB SATA	No	DVD±RW	No	Media	Switch	1xQuadro 600	No	Pro 64	07/19/11

- Part of the US TopSeller™ Program
- Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor W3503 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache														
Implementation	One LGA1366 socket														
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 3-channel capable, six 240-pin DIMM sockets														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 														
Graphics	NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W														
Media reader	Media card reader, internal USB 2.0														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals														
Chipset	Intel X58 Express Chipset , Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O														
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)														
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in														
IEEE 1394 adptr	None														
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755														
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black														
Mouse	Optical Wheel Mouse (USB connector), black														
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified														
ThinkVantage®	Supports ThinkVantage technologies														
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)														
Preload OS	Genuine Windows® 7 Professional 64														
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 														

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- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1: 5.25"	1.6" high,	external,	std optical
Bay 2: 5.25"	1.6" high,	external,	open
Bay 3: 3.5"	1" high,	external,	std media reader
Bay 4: 3.5"	1" high,	internal,	std disk
Bay 5: 3.5"	1" high,	internal,	opt disk
Bay 6: 3.5"	1" high,	internal,	opt disk

Slot 1: full-length,	full-height,	PCIe 2.0 x16 (75W* max)
Slot 2: full-length,	full-height,	PCIe 2.0 x4**
Slot 3: full-length,	full-height,	PCIe 2.0 x16 (75W* max)
Slot 4: full-length,	full-height,	PCIe x1
Slot 5: half-length,	full-height,	32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

** x16 mechanical

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock)
- Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
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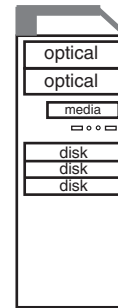
More compatible accessories, please see O-SEV sheet

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4105-5CU	5x6	W3565	3.20	4	1x4GB	1x500GB SATA	No	DVD±RW	None	Media	None	1xQuadro 600	None	Pro 64	12/13/11
4105-6CU	5x6	W3565	3.20	4	1x4GB	1x450GB SAS	No	DVD±RW	None	Media	None	1xQuadro 2000	None	Pro 64	12/13/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor W3565 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 8MB cache														
Implementation	One LGA1366 socket														
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 3-channel capable, six 240-pin DIMM sockets														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 														
Graphics	<i>Some:</i> NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W														
Media reader	Media card reader, internal USB 2.0														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
Hard drive(s)	<i>Some:</i> 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5" <i>Some:</i> 450GB, SAS 3.0Gb/s, 15000 rpm, 3.5"														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals														
SAS controller	<i>SAS model(s):</i> Marvell® 88SE6440, PCIe x4 adapter, 4 SATA/SAS ⁴ connectors, SATA 3.0Gb/s, SAS 3.0Gb/s														
Chipset	Intel X58 Express Chipset , Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O														
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)														
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in														
IEEE 1394 adptr	None														
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755														
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black														
Mouse	Optical Wheel Mouse (USB connector), black														
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified														
ThinkVantage®	Supports ThinkVantage technologies														
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)														
Preload OS	Genuine Windows® 7 Professional 64														
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD or DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 														

Tower



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- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 5.25", 1.6" high, external, open
 Bay 3: 3.5", 1" high, external, std media reader
 Bay 4: 3.5", 1" high, internal, std disk
 Bay 5: 3.5", 1" high, internal, opt disk
 Bay 6: 3.5", 1" high, internal, opt disk

Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 2: full-length, full-height, PCIe 2.0 x4**
 Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max)
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- * Adapters >75W use auxiliary power connector(s) from PSU
 ** x16 mechanical

SECURITY

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GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-SEV sheet

	Name	Type-model	Slot x bay	Processor GHz	Cores	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-config RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptr	ENERGY STAR 5.0	Win7 preload	Avail date
≈ S20	4157-L8U	5x6	W3550	3.06	4	1x2GB	1333MHz	1x500GB ²	3.5"	No	DVD±RW	Media	1xFX380	No	Pending	Pro64	Nov 10
S20	4157-L9U	5x6	W3550	3.06	4	2x2GB	1333MHz	1x500GB	3.5"	No	DVD±RW	Media	1x600	No	Pending	Pro64	Nov 10

- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® W3550 with quad-core, 4.8GT/s(giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 8MB cache			Tower <ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 19.0"D x 18.8"H (with handle)• 175mm W x 483mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support <div><div>optical</div><div>optical</div><div>media</div><div>disk</div><div>disk</div><div>disk</div></div> <div>Bay ① 5.25", 1.6" high, external, std optical</div> <div>Bay ② 5.25", 1.6" high, external, open</div> <div>Bay ③ 3.5", 1" high, external, std media reader</div> <div>Bay ④ 3.5", 1" high, internal, std disk</div> <div>Bay ⑤ 3.5", 1" high, internal, opt disk</div> <div>Bay ⑥ 3.5", 1" high, internal, opt disk</div> <div>Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max)</div> <div>Slot 2: full-length, full-height, PCIe 2.0 x4**</div> <div>Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max)</div> <div>Slot 4: full-length, full-height, PCIe x1</div> <div>Slot 5: half-length, full-height, 32-bit PCI 2.3</div> <div>** x16 mechanical</div>		
Implementation	One LGA1366 socket					
Memory	2GB or 4GB std, 48GB max, UDIMM, PC3-10600 1333MHz DDR3***, ECC , 3-channel capable, six 240-pin DIMM sockets *** System automatically clocks down for processors with 1066MHz DDR3 memory controller					
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU <i>Some: NVIDIA® Quadro® FX 380</i> , PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W <i>Some: NVIDIA Quadro 600</i> , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W					
Media reader	20-in-1 media reader, internal USB 2.0					
SATA disk(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"					
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive					
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals					
Chipset	Intel X58 Express Chipset, Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O					
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)					
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in					
IEEE 1394 adptr	None					
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec					
Speaker	Internal speaker for business audio					
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755					
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black					
Mouse	Optical Wheel Mouse (USB connector), black					
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified					
Cooling	3 to 5 fans (power supply, CPU, rear, opt front PCI [>75W graphics], opt front [SAS])					
Rack mount	Rack shelf support					
Preloaded operating system ²⁰ <div><div>- Genuine Windows® 7 Professional 64</div><div>Preloaded applications⁵ (only some listed)<ul style="list-style-type: none">• Rescue and Recovery™• ThinkVantage System Update• ThinkVantage Toolbox• Norton™ Internet Security (30 days of virus definitions)• Adobe® Reader®• Adobe Flash® Player• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Roxio MyDVD® (DVD±RW)• Corel® WinDVD® (DVD±RW)</div></div>						
Accessories <div><div>2GB PC3-10600 DDR3 ECC UDIMM</div><div>43R2033</div><div>4GB PC3-10600 DDR3 ECC UDIMM</div><div>57Y4138</div><div>1TB SATA 3.0Gb/s Disk (7200 rpm)</div><div>45J7918</div><div>Blu-ray™ Burner SATA 1.5Gb/s</div><div>45K1675</div><div>ThinkVision® L2440p Wide 24" Monitor</div><div>4420HB2</div><div>Other accessories at lenovo.com/accessories</div></div>						
SECURITY <div><div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)</div><div>Supports ThinkVantage® technologies</div><div>GREENGUARD® certified RoHS-compliant <i>Pending:</i> ENERGY STAR® 5.0-compliant EPEAT™ Gold rating</div><div>LIMITED WARRANTY¹<div><div>⇒ 3-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</div><div>⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div></div></div>						

See footnotes for important warranty information

US models announced November 2, 2010

≈ US model withdrawn effective June 2011

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(SEV7-1) November 2010

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global preload	Win7	Ann date (mm/dd/yy)
4157-N1U	5x6	E5603	1.6	4	2x2GB	1x500GB SATA	No	DVD±RW		Media	Switch	1x2000	No	Pro 64	02/15/11
4157-N2U	5x6	E5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW		Media	Switch	1x600	No	Pro 64	02/15/11
4157-N3U	5x6	W3690	3.46	6	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	Switch	1x4000	No	Pro 64	02/15/11
4157-N4U	5x6	W3550	3.06	4	2x2GB	1x300GB SAS	No	DVD±RW		Media	Switch		No	Pro 64	02/15/11
4157-N5U	5x6	W3550	3.06	4	2x2GB	1x300GB SAS	No	DVD±RW		Media	Switch	1x2000	No	Pro 64	02/15/11
4157-N6U	5x6	W3690	3.46	6	3x2GB	1x300GB SAS	No	DVD±RW	1394	Media	Switch	1x4000	No	Pro 64	02/15/11

• These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor W3550 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache Intel Xeon Processor W3690 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor E5607 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache			<div><div>Tower</div><div><div><div>optical</div><div>optical</div><div>media</div><div>disk</div><div>disk</div><div>disk</div></div></div></div> <div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 19.0"D x 18.8"H (with handle)• 175mm W x 483mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support</div>
Implementation	One LGA1366 socket			
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 3-channel capable, six 240-pin DIMM sockets			
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed			
Graphics	<i>Some:</i> NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W <i>Some:</i> NVIDIA Quadro 4000 , PCIe x16 adapter, 2GB, two DisplayPort, one dual-link DVI-I, one stereo, 142W			
Media reader	Media card reader, internal USB 2.0			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
Hard drive(s)	<i>Some:</i> 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5" <i>Some:</i> 300GB, SAS 3.0Gb/s, 15000 rpm, 3.5"			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals			
SAS controller	<i>Some:</i> Marvell® 88SE6440, PCIe x4 adapter, 4 SATA/SAS ⁴ connectors, SATA 3.0Gb/s, SAS 3.0Gb/s (SAS model(s) only)			
Chipset	Intel X58 Express Chipset , Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O			
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in			
IEEE 1394 adptr	<i>Some:</i> FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear			
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755			
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified			
ThinkVantage®	Supports ThinkVantage technologies			
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)			
Preload OS	Genuine Windows® 7 Professional 64			
Preloaded applications	<ul style="list-style-type: none">• Rescue and Recovery®• ThinkVantage System Update• ThinkVantage Toolbox• Norton® Internet Security (30 days of virus definitions)• Microsoft® Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW model(s) only)• Roxio MyDVD® (DVD±RW model(s) only)• Corel® WinDVD® (DVD or DVD±RW model(s) only)• Ulead® DVD MovieFactory® (Blu-ray model(s) only)			
<div><div>SECURITY</div><div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• USB port disablement (front or all)• Chassis intrusion switch on selected model(s)</div></div>				
<div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div>				
More compatible accessories, please see O-SEV sheet				

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Win7 Global preload	Ann date (mm/dd/yy)
4157-7AU	5x6	E5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	None	Media	None	1xQuadro 400	No	Pro 64 04/26/11
4157-8AU	5x6	W3550	3.06	4	1x2GB	1x500GB SATA	No	DVD±RW	None	Media	None	1xQuadro 400	No	Pro 64 04/26/11
4157-9AU	5x6	W3503	2.40	2	1x2GB	1x500GB SATA	No	DVD±RW	None	Media	None	1xQuadro 400	No	Pro 64 04/26/11

- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor W3503 with dual-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor W3550 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache Intel Xeon Processor E5607 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache			<div><div>Tower</div><div><div><div>optical</div><div>optical</div><div>media</div><div>disk</div><div>disk</div><div>disk</div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 19.0"D x 18.8"H (with handle)• 175mm W x 483mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support</div></div>
Implementation	One LGA1366 socket			
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 3-channel capable, six 240-pin DIMM sockets			
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed			
Graphics	NVIDIA® Quadro® 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W			
Media reader	Media card reader, internal USB 2.0			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals			
Chipset	Intel X58 Express Chipset , Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O			
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in			
IEEE 1394 adptr	None			
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755			
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified			
ThinkVantage®	Supports ThinkVantage technologies			
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)			
Preload OS	Genuine Windows® 7 Professional 64			
Preloaded applications	<ul style="list-style-type: none">• Rescue and Recovery®• ThinkVantage System Update• ThinkVantage Toolbox• Norton® Internet Security (30 days of virus definitions)• Microsoft® Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW model(s) only)• Roxio MyDVD® (DVD±RW model(s) only)• Corel® WinDVD® (DVD or DVD±RW model(s) only)• Ulead® DVD MovieFactory® (Blu-ray model(s) only)			
<div><div>SECURITY</div><div><ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock)• Security slot (in rear for optional Kensington® Microsaver® cable)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse• USB port disablement (front or all)• Chassis intrusion switch on selected model(s)</div></div>				
<div><div>GREENGUARD® certified</div><div>RoHS-compliant</div><div>EPEAT™ Gold rating</div></div>				
More compatible accessories, please see O-SEV sheet				

ThinkStation® S20 (4157) - Windows 7 (July 2011)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4157-8BU	5x6	W3565	3.20	4	2x2GB	1x500GB SATA	No	DVD±RW	None	Media	Switch	1xQuadro 400		Pro 64	07/19/11
4157-9BU	5x6	W3565	3.20	4	2x2GB	1x500GB SATA	No	DVD±RW	None	Media	Switch	1xQuadro 600		Pro 64	07/19/11
4157-1CU	5x6	W3565	3.20	4	2x2GB	1x500GB SATA	No	DVD±RW	None	Media	Switch	1xQuadro 2000		Pro 64	07/19/11
4157-2CU	5x6	W3565	3.20	4	3x2GB	1x450GB SAS	No	DVD±RW	None	Media	Switch	1xQuadro 4000	Global	Pro 64	07/19/11

- *Microsoft Office 2010 Product Key Ready (O10PKR)*

Processor	Intel® Xeon® Processor W3565 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 8MB cache
Implementation	One LGA1366 socket
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC, 3-channel capable, six 240-pin DIMM sockets <ul style="list-style-type: none">Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed
Additional memory disclaimers	
Graphics	Some: NVIDIA® Quadro® 400, PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W Some: NVIDIA Quadro 600, PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W Some: NVIDIA Quadro 2000, PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W Some: NVIDIA Quadro 4000, PCIe x16 adapter, 2GB, two DisplayPort, one dual-link DVI-I, one stereo, 142W
Media reader	Media card reader, internal USB 2.0
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive
Hard drive(s)	Some: 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5" Some: 450GB, SAS 3.0Gb/s, 15000 rpm, 3.5"
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals
SAS controller	SAS model(s): Marvell® 88SE6440, PCIe x4 adapter, 4 SATA/SAS ⁺ connectors, SATA 3.0Gb/s, SAS 3.0Gb/s
Chipset	Intel X58 Express Chipset, Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in
IEEE 1394 adptr	None
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec
Speaker	Internal speaker for business audio
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black
Mouse	Optical Wheel Mouse (USB connector), black
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified
ThinkVantage®	Supports ThinkVantage technologies
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)
Preload OS	Genuine Windows® 7 Professional 64
Preloaded applications	<ul style="list-style-type: none">Rescue and Recovery®ThinkVantage System UpdateThinkVantage ToolboxNorton® Internet Security (30 days of virus definitions)Microsoft® Office 2010 preloaded; purchase product key to activateRoxio® Creator® Business Edition (DVD±RW model(s) only)Roxio MyDVD® (DVD±RW model(s) only)Corel® WinDVD® (DVD or DVD±RW model(s) only)Ulead® DVD MovieFactory® (Blu-ray model(s) only)

Tower	<div><div><div>optical</div><div>optical</div><div>media<div><div></div><div></div><div></div></div></div><div><div>disk</div><div>disk</div><div>disk</div></div></div><ul style="list-style-type: none">Raven black color; metal case6.9"W x 19.0"D x 18.8"H (with handle)175mm W x 483mm D x 478mm H38.5 lb (17.5kg) max configuration31-literRemovable handle on top frontToolless side cover removalToolless disk and optical drive removalToolless adapter retentionIlluminated front iconsRack shelf support<div><div>Bay 1: 5.25", 1.6" high, external, std optical</div><div>Bay 2: 5.25", 1.6" high, external, open</div><div>Bay 3: 3.5", 1" high, external, std media reader</div><div>Bay 4: 3.5", 1" high, internal, std disk</div><div>Bay 5: 3.5", 1" high, internal, opt disk</div><div>Bay 6: 3.5", 1" high, internal, opt disk</div></div><div><div>Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max)</div><div>Slot 2: full-length, full-height, PCIe 2.0 x4**</div><div>Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max)</div><div>Slot 4: full-length, full-height, PCIe x1</div><div>Slot 5: half-length, full-height, 32-bit PCI 2.3</div></div><div>* Adapters >75W use auxiliary power connector(s) from PSU</div><div>** x16 mechanical</div></div>
SECURITY	<ul style="list-style-type: none">Security chip (see information on left)Side cover lock (ships with two identical keys)Padlock loop (in rear for opt padlock)Security slot (in rear for optional Kensington® Microsaver® cable)Power-on passwordAdministrator passwordBoot sequence controlBoot without keyboard, mouseUSB port disablement (front or all)Chassis intrusion switch on selected model(s)
GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating	
More compatible accessories, please see O-SEV sheet	

See footnotes for important warranty information
US model(s) announced July 19, 2011

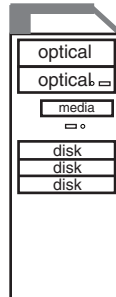
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ThinkStation® S20 (4157) - Global (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory DIMMs	Disk(s)	Disk size	Pre-config RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptr	Win7 preload	Global	Avail date
☞ S20	4157-G9U	5x6	W3530	2.80	4	2x2GB	1x146GB ² SAS	3.5"	No	DVD±RW	Media		None	Pro64	Global	Aug 10
☞ S20	4157-H1U	5x6	W3530	2.80	4	2x2GB	1x146GB SAS	3.5"	No	DVD±RW	Media	1xFX1800	None	Pro64	Global	Aug 10
☞ S20	4157-H2U	5x6	W3550	3.06	4	3x2GB	1x146GB SAS	3.5"	No	DVD±RW	Media		None	Pro64	Global	Aug 10
☞ S20	4157-H3U	5x6	W3550	3.06	4	3x2GB	1x146GB SAS	3.5"	No	DVD±RW	Media	1xFX1800	None	Pro64	Global	Aug 10
☞ S20	4157-H4U	5x6	W3680	3.33	6	3x2GB	1x146GB SAS	3.5"	No	DVD±RW	Media	1xFX3800	None	Pro64	Global	Aug 10
☞ S20	4157-H5U	5x6	W3565	3.20	4	3x2GB	1x146GB SAS	3.5"	No	DVD±RW	Media		None	Pro64	Global	Aug 10
☞ S20	4157-H6U	5x6	W3530	2.80	4	2x2GB	1x150GB SATA	2.5"	No	DVD±RW	Media	1xFX1800	None	Pro64	Global	Aug 10
☞ S20	4157-H7U	5x6	W3530	2.80	4	3x2GB	1x500GB SATA	3.5"	No	DVD±RW	Media	1xFX580	None	Pro64	Global	Aug 10
☞ S20	4157-H8U	5x6	W3530	2.80	4	3x2GB	1x500GB SATA	3.5"	No	DVD±RW	Media	1xFX1800	None	Pro64	Global	Aug 10
☞ S20	4157-H9U	5x6	W3550	3.06	4	3x2GB	1x500GB SATA	3.5"	No	DVD±RW	Media	1xFX1800	None	Pro64	Global	Aug 10
☞ S20	4157-J6U	5x6	W3530	2.80	4	2x2GB	1x500GB SATA	3.5"	No	DVD±RW	Media	1x2000	None	Pro64	Global	Oct 10
☞ S20	4157-J7U	5x6	W3550	3.06	4	2x2GB	1x500GB SATA	3.5"	No	DVD±RW	Media	1x2000	None	Pro64	Global	Oct 10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor W3530, W3550, or W3565 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor W3680 with six-core, 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache One LGA1366 socket		Tower <ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 19.0"D x 18.8"H (with handle)• 175mm W x 483mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support														
Memory	4GB or 6GB std, 48GB max, UDIMM, PC3-10600 1333MHz DDR3***, ECC, 3-channel capable, six 240-pin DIMM sockets *** System automatically clocks down for processors with 1066MHz DDR3 memory controller																
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU <i>Some: NVIDIA® Quadro® FX 580, PCIe x16 adapter, 512MB, two DisplayPort™, one dual-link DVI-I****, 40W</i> <i>Some: NVIDIA Quadro FX 1800, PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W</i> <i>Some: NVIDIA Quadro FX 3800, PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 108W</i> <i>Some: NVIDIA Quadro 2000, PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W</i> **** Only two display connectors are active at a time		Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, open Bay ③ 3.5", 1" high, external, std media reader Bay ④ 3.5", 1" high, internal, std disk Bay ⑤ 3.5", 1" high, internal, opt disk Bay ⑥ 3.5", 1" high, internal, opt disk Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 2: full-length, full-height, PCIe 2.0 x4** Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 4: full-length, full-height, PCIe x1 Slot 5: half-length, full-height, 32-bit PCI 2.3 ** x16 mechanical														
Media reader	20-in-1 media reader, internal USB 2.0		SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)														
SATA disk(s)	<i>Some: 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"</i> <i>Some: 150GB, SATA 3.0Gb/s, 10000 rpm, 2.5"</i> <i>Some: 146GB, SAS 3.0Gb/s, 15000 rpm, 3.5"</i>																
SAS disk(s)	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																
SATA DVD±RW	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals																
Disk controller	SAS model(s): Marvell® 88SE6440, PCIe x4 adapter, 4 SATA/SAS ⁴ connectors, SATA 3.0Gb/s, SAS 3.0Gb/s																
Chipset	Intel X58 Express Chipset, Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O																
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)																
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in																
IEEE 1394 adptr	None																
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec																
Speaker	Internal speaker for business audio																
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755																
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant		Supports ThinkVantage® technologies														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black		GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating														
Mouse	Optical Wheel Mouse (USB connector), black																
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified																
Cooling	3 to 5 fans (power supply, CPU, rear, opt front PCI [>75W graphics], opt front [SAS])																
Rack mount	Rack shelf support																
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 64 Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Corel® WinDVD® (DVD±RW)		Accessories <table><tr><td>2GB PC3-10600 DDR3 ECC UDIMM</td><td>43R2033</td></tr><tr><td>4GB PC3-10600 DDR3 ECC UDIMM</td><td>57Y4138</td></tr><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Blu-ray™ Burner SATA 1.5Gb/s</td><td>45K1675</td></tr><tr><td>ThinkVision® L2440p Wide 24" Monitor</td><td>4420HB2</td></tr></table> Other accessories at lenovo.com/accessories		2GB PC3-10600 DDR3 ECC UDIMM	43R2033	4GB PC3-10600 DDR3 ECC UDIMM	57Y4138	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Blu-ray™ Burner SATA 1.5Gb/s	45K1675	ThinkVision® L2440p Wide 24" Monitor	4420HB2		
2GB PC3-10600 DDR3 ECC UDIMM	43R2033																
4GB PC3-10600 DDR3 ECC UDIMM	57Y4138																
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																
Blu-ray™ Burner SATA 1.5Gb/s	45K1675																
ThinkVision® L2440p Wide 24" Monitor	4420HB2																

See footnotes for important warranty information

☞ US models announced October 26, 2010; previous models on August 3, 2010

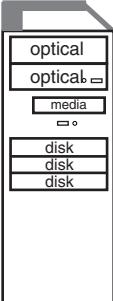
☞ US models withdrawn effective December 2010 or February 2011

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(SEV6-1) November 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory DIMMs	Disk(s)	Disk size	Pre-config RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptr	Win7 preload	Global	Avail date
⚡	S20 4157-M1U	5x6	W3550	3.06	4	2x2GB	1x146GB ² SAS	3.5"	No	DVD±RW	Media	1x2000	None	Pro64	Global	Nov 10
⚡	S20 4157-M2U	5x6	W3550	3.06	4	2x2GB	1x146GB SAS	3.5"	No	DVD±RW	Media	1x2000	None	Pro64	Global	Nov 10
⚡	S20 4157-M3U	5x6	W3550	3.06	4	2x2GB	1x150GB SATA	2.5"	No	DVD±RW	Media	1x2000	None	Pro64	Global	Nov 10
⚡	S20 4157-M4U	5x6	W3550	3.06	4	3x2GB	1x500GB SATA	3.5"	No	DVD±RW	Media	1x600	None	Pro64	Global	Nov 10
⚡	S20 4157-M5U	5x6	W3680	3.33	6	3x2GB	1x300GB SAS	3.5"	No	DVD±RW	Media	1x4000	None	Pro64	Global	Nov 10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor W3550 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor W3680 with six-core, 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache One LGA1366 socket			Tower <ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 19.0"D x 18.8"H (with handle)• 175mm W x 483mm D x 478mm H• 38.5 lb (17.5kg) max configuration• 31-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support 			
Implementation	One LGA1366 socket			Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, open Bay ③ 3.5", 1" high, external, std media reader Bay ④ 3.5", 1" high, internal, std disk Bay ⑤ 3.5", 1" high, internal, opt disk Bay ⑥ 3.5", 1" high, internal, opt disk Slot 1: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 2: full-length, full-height, PCIe 2.0 x4** Slot 3: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 4: full-length, full-height, PCIe x1 Slot 5: half-length, full-height, 32-bit PCI 2.3 ** x16 mechanical			
Memory	4GB or 6GB std, 48GB max, UDIMM , PC3-10600 1333MHz DDR3***, ECC , 3-channel capable, six 240-pin DIMM sockets *** System automatically clocks down for processors with 1066MHz DDR3 memory controller						
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU <i>Some:</i> NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W <i>Some:</i> NVIDIA Quadro 4000 , PCIe x16 adapter, 2GB, two DisplayPort, one dual-link DVI-I****, one stereo, 142W **** Only two display connectors are active at a time						
Media reader	20-in-1 media reader, internal USB 2.0						
SATA disk(s)	<i>Some:</i> 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5" <i>Some:</i> 150GB , SATA 3.0Gb/s, 10000 rpm, 2.5"						
SAS disk(s)	<i>Some:</i> 146GB or 300GB , SAS 3.0Gb/s, 15000 rpm, 3.5"						
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive						
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, three SATA connectors for disks, two SATA connectors for opticals <i>SAS model(s):</i> Marvell® 88SE6440, PCIe x4 adapter, 4 SATA/SAS ⁴ connectors, SATA 3.0Gb/s, SAS 3.0Gb/s						
Chipset	Intel X58 Express Chipset , Intel I/O Controller Hub 10 RAID (ICH10R) for RAID 0, 1, 5 support, Winbond® W83627DHG-P Super I/O						
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)						
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), ethernet (RJ-45), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side-out), Optical SPDIF digital out, Optical SPDIF digital in						
IEEE 1394 adptr	None						
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec						
Speaker	Internal speaker for business audio						
Ethernet	One gigabit ethernet on planar, Broadcom® BCM5755						
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant						
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black						
Mouse	Optical Wheel Mouse (USB connector), black						
Power supply	625 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified						
Cooling	3 to 5 fans (power supply, CPU, rear, opt front PCI [>75W graphics], opt front [SAS])						
Rack mount	Rack shelf support						
Preloaded operating system²⁰				Accessories			
- Genuine Windows® 7 Professional 64				2GB PC3-10600 DDR3 ECC UDIMM 43R2033			
				4GB PC3-10600 DDR3 ECC UDIMM 57Y4138			
				500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
				1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
				Blu-ray™ Burner SATA 1.5Gb/s 45K1675			
				ThinkVision® L2440p Wide 24" Monitor 4420HB2			
				Other accessories at lenovo.com/accessories			
Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Rescue and Recovery™• Microsoft Office 2010 preloaded; purchase product key to activate• Roxio® Creator® Business Edition (DVD±RW)• Corel® WinDVD® (DVD±RW)							
				SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)			
				Supports ThinkVantage® technologies			
				GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating			
				LIMITED WARRANTY¹ <ul style="list-style-type: none">➤ 3-year parts and labor➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378			

See footnotes for important warranty information

US models announced November 2, 2010

⚡ US models withdrawn effective December 2010 or May 2011



Lenovo ThinkStation D20



Lenovo ThinkStation S20 (left)
Lenovo ThinkStation D20 (right)



Lenovo ThinkStation D20



Lenovo ThinkStation D20
with Lenovo ThinkVision L2440 Monitor



Lenovo ThinkStation Graphics Card Option
NVIDIA® Quadro® 2GB 4000 (57Y4480)*



Lenovo ThinkStation Graphics Card Option
NVIDIA Quadro 2.5GB 5000 (57Y4481)

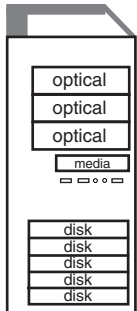
* NVIDIA Quadro 2GB 4000 (57Y4480) option packaging contains one 3D stereo bracket

ThinkStation® D20 (4155) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

	Type- Name	Slot x model bay	Processor(s) GHz	Cores	Memory DIMMs	Memory type	Disk(s)	Disk size	Pre-config RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptr	Win7 preload	Avail date
⚡	D20	4155-B6U 6x9	1xE5507	2.26	4	2x1GB	UDIMM	1x500GB ² SATA	3.5"	No	DVD±RW	Media	1xFX580	1394	Pro64 Mar 10
⚡	D20	4155-B7U 6x9	1xE5620	2.40	4	2x2GB	UDIMM	1x500GB SATA	3.5"	No	DVD±RW	Media	1xFX1800	1394	Pro64 Mar 10
⚡	D20	4155-E1U 6x9	1xE5620	2.40	4	2x2GB	RDIMM	1x500GB SATA	3.5"	No	DVD±RW	Media			Pro64 Sep 10
⚡	D20	4155-F1U 6x9	1XX5650	2.66	6	2x2GB	UDIMM	1x500GB SATA	3.5"	No	DVD±RW	Media	1x4000	1394	Pro64 Oct 10
⚡	D20	4155-E9U 6x9	1xE5620	2.40	4	2x2GB	UDIMM	1x500GB SATA	3.5"	No	DVD±RW	Media	1x2000	1394	Pro64 Oct 10
⚡	D20	4155-G1U 6x9	1XE5507	2.26	4	2x2GB	UDIMM	1x500GB SATA	3.5"	No	DVD±RW	Media	1x600	1394	Pro64 Nov 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Up to two processors, one processor standard, Intel® Xeon® Processor E5507 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect) Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	Tower <ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60 lb (27.1kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit 
Implementation	Two LGA1366 sockets	
Memory	<i>UDIMM Model (s):</i> 2GB or 4GB std, 48GB max, <i>RDIMM Model (s):</i> 4GB std, 192GB max (pending 16GB RDIMM availability); PC3-10600 1333MHz DDR3**, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets*** ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller *** Over six DIMMs requires dual processors	Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, open Bay ③ 5.25", 1.6" high, external, open Bay ④ 3.5", 1" high, external, std media reader Bay ⑤ 3.5", 1" high, internal, std disk Bay ⑥ 3.5", 1" high, internal, opt disk Bay ⑦ 3.5", 1" high, internal, opt disk Bay ⑧ 3.5", 1" high, internal, opt disk Bay ⑨ 3.5", 1" high, internal, opt disk
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU <i>Some:</i> NVIDIA® Quadro® FX 580 , PCIe x16 adapter, 512MB, two DisplayPort™, one dual-link DVI-I****, 40W <i>Some:</i> NVIDIA Quadro FX 1800 , PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W <i>Some:</i> NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W <i>Some:</i> NVIDIA Quadro 4000 , PCIe x16 adapter, 2GB, two DisplayPort, one dual-link DVI-I****, one stereo, 142W **** Only two display connectors are active at a time	Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x4 (x16 mechanical) Slot 6: half-length, full-height, 32-bit PCI 2.3
Diskette drive	None (use USB port)	SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)
Media reader	20-in-1 media reader, internal USB 2.0	
SATA disk(s)	500GB , SATA 3.0Gb/s, 7200 rpm, 3.5"	
SAS disk(s)	None	
SATA DVD±RW	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s	SUPPORTS <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating</p> <p>LIMITED WARRANTY¹</p> <p>⇒ 3-year parts and labor</p> <p>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</p> <p>⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty</p> <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services<p>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</p>
Disk Controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID ⁵ 0, 1, 5, 10, integrated in Marvell® 88SE6480	
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O	
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)	
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in	
IEEE 1394 adptr	<i>Some:</i> FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec	
Speaker	Internal speaker for business audio	
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754	
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified	
Cooling	Five fans (power supply, first processor, second processor, rear, front disk)	
Rack mount	Rack shelf support or optional sliding rack mount rail kit support	
Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64		

See footnotes for important warranty information

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⚡ US models announced October 26 or November 2, 2010; previous models on March 16, September 21, or October 12, 2010 (SEV4-5) November 2010

⚡ US models withdrawn effective February or May 2011

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Win7 Global preload	Ann date (mm/dd/yy)
≈ 4155-G6U	6x9	1xE5603	1.6	4	1x2GB	1x500GB SATA	No	DVD±RW		Media	Switch	1xFX380	No	Pro 64 02/15/11
4155-G7U	6x9	1xE5607	2.26	4	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	Switch	1x600	No	Pro 64 02/15/11
4155-G8U	6x9	1xE5645	2.4	6	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	Switch	1x2000	No	Pro 64 02/15/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor E5607 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache Intel Xeon Processor E5645 with six-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache Two LGA1366 sockets, supports up to two processors													
Implementation	Two LGA1366 sockets, supports up to two processors													
Memory	48GB max, UDIMM , PC3-10600 1333MHz DDR3, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 													
Graphics	<i>Some:</i> NVIDIA® Quadro® FX 380 , PCIe x16 adapter, 256MB, two dual-link DVI-I, 35W <i>Some:</i> NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W													
Media reader	Media card reader, internal USB 2.0													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"													
SATA controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10;													
SAS controller	5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 10, integrated in Marvell® 88SE6480													
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)													
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in													
IEEE 1394 adptr	<i>Some:</i> FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear													
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec													
Speaker	Internal speaker for business audio													
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754													
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 													

Tower

- Raven black color; metal case
- 8.3"W x 23.7"D x 19.1"H (with handle)
- 210mm W x 602mm D x 485mm H
- 60 lb (27.1kg) max configuration
- 55-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical

Bay 2: 5.25", 1.6" high, external, open

Bay 3: 5.25", 1.6" high, external, open

Bay 4: 3.5", 1" high, external, std media reader

Bay 5: 3.5", 1" high, internal, std disk

Bay 6: 3.5", 1" high, internal, opt disk

Bay 7: 3.5", 1" high, internal, opt disk

Bay 8: 3.5", 1" high, internal, opt disk

Bay 9: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1

Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)

Slot 3: full-length, full-height, 32-bit PCI 2.3

Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)

Slot 5: full-length, full-height, PCIe x4 (x16 mechanical)

Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
RoHS-compliant
EPEAT™ Gold rating

More compatible accessories, please see O-SEV sheet

See footnotes for important warranty information

US models announced February 15, 2011

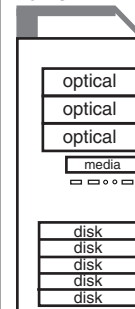
≈ US model withdrawn effective June 2011

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(SEV8-4) February 2011

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4155-H9U	6x9	1xE5603	1.6	4	1x2GB	1x500GB SATA	No	DVD±RW	1394	Media	None	1xQuadro 400	No	Pro 64	04/26/11

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache														
Implementation	Two LGA1366 sockets, supports up to two processors														
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 														
Graphics	NVIDIA® Quadro® 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W														
Media reader	Media card reader, internal USB 2.0														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"														
SATA controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10;														
SAS controller	5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 10, integrated in Marvell® 88SE6480														
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O														
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)														
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in														
IEEE 1394 adptr	FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear														
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec														
Speaker	Internal speaker for business audio														
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754														
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black														
Mouse	Optical Wheel Mouse (USB connector), black														
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified														
ThinkVantage®	Supports ThinkVantage technologies														
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)														
Preload OS	Genuine Windows® 7 Professional 64														
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 														

Tower


- Raven black color; metal case
- 8.3"W x 23.7"D x 19.1"H (with handle)
- 210mm W x 602mm D x 485mm H
- 60 lb (27.1kg) max configuration
- 55-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high,	external,	std optical
Bay 2: 5.25", 1.6" high,	external,	open
Bay 3: 5.25", 1.6" high,	external,	open
Bay 4: 3.5", 1" high,	external,	std media reader
Bay 5: 3.5", 1" high,	internal,	std disk
Bay 6: 3.5", 1" high,	internal,	opt disk
Bay 7: 3.5", 1" high,	internal,	opt disk
Bay 8: 3.5", 1" high,	internal,	opt disk
Bay 9: 3.5", 1" high,	internal,	opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x4 (x16 mechanical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

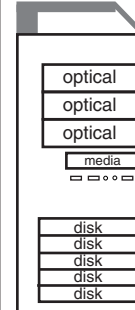
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More compatible accessories, please see O-SEV sheet

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4155-K4U	6x9	1xX5650	2.66	6	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	Switch	1xQuadro 600	No	Pro 64	07/19/11

- Part of the US TopSeller™ Program
- Microsoft Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor X5650 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache														
Implementation	Two LGA1366 sockets, supports up to two processors														
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 														
Graphics	NVIDIA® Quadro® 600 , PCIe x16 adapter, 1GB, one DisplayPort™, one dual-link DVI-I, 40W														
Media reader	Media card reader, internal USB 2.0														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"														
SATA controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10;														
SAS controller	5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 10, integrated in Marvell® 88SE6480														
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O														
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)														
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in														
IEEE 1394 adptr	FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear														
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec														
Speaker	Internal speaker for business audio														
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754														
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black														
Mouse	Optical Wheel Mouse (USB connector), black														
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified														
ThinkVantage®	Supports ThinkVantage technologies														
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)														
Preload OS	Genuine Windows® 7 Professional 64														
Preloaded applications	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 														

Tower


- Raven black color; metal case
- 8.3"W x 23.7"D x 19.1"H (with handle)
- 210mm W x 602mm D x 485mm H
- 60 lb (27.1kg) max configuration
- 55-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1:	5.25", 1.6" high,	external,	std optical
Bay 2:	5.25", 1.6" high,	external,	open
Bay 3:	5.25", 1.6" high,	external,	open
Bay 4:	3.5", 1" high,	external,	std media reader
Bay 5:	3.5", 1" high,	internal,	std disk
Bay 6:	3.5", 1" high,	internal,	opt disk
Bay 7:	3.5", 1" high,	internal,	opt disk
Bay 8:	3.5", 1" high,	internal,	opt disk
Bay 9:	3.5", 1" high,	internal,	opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x4 (x16 mechanical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

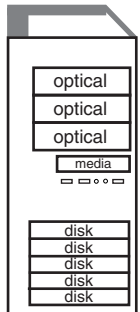
- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-SEV sheet

Type- Name	model	Slot x bay	Processor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-config RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptr	Win7 preload	Avail date
✓	D20 4158-A9U 6x9	1x	E5503	2.00	2	2x1GB	1333MHz	1x500GB ²	SATA 3.5"	No	DVD±RW	Media	1xNVS295	1394	Pro64	Mar 10
✓	D20 4158-B1U 6x9	1x	E5507	2.26	4	2x2GB	1333MHz	1x300GB	SAS 3.5"	No	DVD±RW	Media	1xFX1800	1394	Pro64	Mar 10
✓	D20 4158-F8U 6x9	1x	E5640	2.66	4	2x2GB	1333MHz	1x300GB	SAS 3.5"	No	DVD±RW	Media	1x5000	1394	Pro64	Oct 10
✓	D20 4158-F9U 6x9	1x	E5620	2.40	4	2x2GB	1333MHz	1x500GB	SATA 3.5"	No	DVD±RW	Media	1x2000	1394	Pro64	Oct 10
✓	D20 4158-G6U 6x9	1x	E5507	2.26	4	2x2GB	1333MHz	1x300GB	SAS 3.5"	No	DVD±RW	Media	1x2000	1394	Pro64	Nov 10
✓	D20 4158-G7U 6x9	1x	E5620	2.40	4	2x2GB	1333MHz	1x500GB	SATA 3.5"	No	DVD±RW	Media	1x600	1394	Pro64	Nov 10
✓	D20 4158-G8U 6x9	1x	E5630	2.53	4	2x2GB	1333MHz	1x500GB	SATA 3.5"	No	DVD±RW	Media	1x2000	1394	Pro64	Nov 10
✓	D20 4158-G9U 6x9	1x	E5640	2.66	4	2x2GB	1333MHz	1x300GB	SAS 3.5"	No	DVD±RW	Media	1x2000	1394	Pro64	Nov 10
✓	D20 4158-H1U 6x9	1x	X5660	2.80	6	2x2GB	1333MHz	1x300GB	SAS 3.5"	No	DVD±RW	Media	1x5000	1394	Pro64	Nov 10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Up to two processors, one processor standard, Intel® Xeon® Processor E5503 with dual-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5507 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620, E5630, or E5640 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5660 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	Tower <ul style="list-style-type: none"> Raven black color; metal case 8.3"W x 23.7"D x 19.1"H (with handle) 210mm W x 602mm D x 485mm H 60 lb (27.1kg) max configuration 55-liter Removable handle on top front Toolless side cover removal Toolless disk and optical drive removal Toolless adapter retention Illuminated front icons Rack shelf support or optional rail kit 
Implementation	Two LGA1366 sockets	Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, open Bay ③ 5.25", 1.6" high, external, open Bay ④ 3.5", 1" high, external, std media reader Bay ⑤ 3.5", 1" high, internal, std disk Bay ⑥ 3.5", 1" high, internal, opt disk Bay ⑦ 3.5", 1" high, internal, opt disk Bay ⑧ 3.5", 1" high, internal, opt disk Bay ⑨ 3.5", 1" high, internal, opt disk
Memory	2GB or 4GB std, 48GB max, UDIMM , PC3-10600 1333MHz DDR3** , ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets*** ** System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller *** Over six DIMMs requires dual processors	Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x4 (x16 mechanical) Slot 6: half-length, full-height, 32-bit PCI 2.3
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU <i>Some:</i> NVIDIA® Quadro® NVS 295 , PCIe x16 adapter, 256MB, two DisplayPort™, 23W <i>Some:</i> NVIDIA Quadro FX 1800 , PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W <i>Some:</i> NVIDIA Quadro 600 , PCIe x16 adapter, 1GB, one DisplayPort, one dual-link DVI-I, 40W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 62W <i>Some:</i> NVIDIA Quadro 5000 , PCIe x16 adapter, 2.5GB, two DisplayPort, one dual-link DVI-I****, one stereo, 152W **** Only two display connectors are active at a time	SECURITY <ul style="list-style-type: none"> Security chip (see information on left) Side cover lock (ships with two identical keys) Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) Power-on password Administrator password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (front or all)
Diskette drive	None (use USB port)	GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Media reader	20-in-1 media reader, internal USB 2.0	
SATA disk(s)	<i>Some:</i> 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5"	LIMITED WARRANTY¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
SAS disk(s)	<i>Some:</i> 300GB , SAS 3.0Gb/s, 15000 rpm	
SATA DVD±RW	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s	
Disk Controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID ⁵ 0, 1, 5, 10, integrated in Marvell® 88SE6480	
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O	
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)	
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in	
IEEE 1394 adptr	FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear	
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec	
Speaker	Internal speaker for business audio	
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754	
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified	
Cooling	Five fans (power supply, first processor, second processor, rear, front disk)	
Rack mount	Rack shelf support or optional sliding rack mount rail kit support	

See footnotes for important warranty information

Ⓜ US models announced October 26 or November 2, 2010; previous models on March 16 or October 12, 2010

✗ US model withdrawn effective February or May 2011

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(SEV4-3) November 2010

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Win7 Global preload	Ann date (mm/dd/yy)
4158-J2U	6x9	1xE5603	1.6	4	1x2GB	1x500GB SATA	No	DVD±RW		Media	Switch	1xNVS 295	No	Pro 64 02/15/11
4158-J3U	6x9	1xX5647	2.93	4	2x2GB	1x300GB SATA	No	DVD±RW		Media	Switch		No	Pro 64 02/15/11
4158-J4U	6x9	1xX5687	3.6	4	3x2GB	1x300GB SATA	No	DVD±RW	1394	Media	Switch		No	Pro 64 02/15/11
4158-J5U	6x9	1xX5647	2.93	4	2x2GB	1x300GB SAS	No	DVD±RW		Media	Switch	1x5000	No	Pro 64 02/15/11
4158-J6U	6x9	1xE5607	2.26	4	2x2GB	1x300GB SAS	No	DVD±RW		Media	Switch	1x2000	No	Pro 64 02/15/11
4158-J7U	6x9	1xE5645	2.4	6	2x2GB	1x500GB SATA	No	DVD±RW		Media	Switch	1x2000	No	Pro 64 02/15/11
4158-J8U	6x9	1xX5647	2.93	4	2x2GB	1x300GB SAS	No	DVD±RW		Media	Switch	1x4000	No	Pro 64 02/15/11
4158-J9U	6x9	1xX5647	2.93	4	2x2GB	1x500GB SATA	No	DVD±RW		Media	Switch	1x2000	No	Pro 64 02/15/11
4158-K1U	6x9	1xX5690	3.46	6	3x2GB	1x300GB SAS	No	DVD±RW	1394	Media	Switch	1x5000	No	Pro 64 02/15/11
Processor	Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor E5607 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache Intel Xeon Processor E5645 with six-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor X5647 with quad-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor X5687 with quad-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor X5690 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache													
Implementation	Two LGA1366 sockets, supports up to two processors													
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed Over six DIMMs requires dual processors 													
Graphics	<i>Some:</i> NVIDIA® Quadro® NVS 295 , PCIe x16 adapter, 256MB, two DisplayPort™, 23W <i>Some:</i> NVIDIA Quadro 2000 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I, 62W <i>Some:</i> NVIDIA Quadro 4000 , PCIe x16 adapter, 2GB, two DisplayPort, one dual-link DVI-I, one stereo, 142W <i>Some:</i> NVIDIA Quadro 5000 , PCIe x16 adapter, 2.5GB, two DisplayPort, one dual-link DVI-I, one stereo, 152W													
Media reader	Media card reader, internal USB 2.0													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Hard drive(s)	<i>Some:</i> 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5" <i>Some:</i> 300GB, SATA 3.0Gb/s, 10000 rpm, 2.5" <i>Some:</i> 300GB, SAS 3.0Gb/s, 15000 rpm, 3.5"													
SATA controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10;													
SAS controller	5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 10, integrated in Marvell® 88SE6480													
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)													
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in													
IEEE 1394 adptr	<i>Some:</i> FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear													
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec													
Speaker	Internal speaker for business audio													
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754													
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications (only some listed)	<ul style="list-style-type: none"> Rescue and Recovery® Microsoft® Office 2010 preloaded; purchase product key to activate Roxio® Creator® Business Edition (DVD±RW model(s) only) Roxio MyDVD® (DVD±RW model(s) only) 													

Tower

- Raven black color; metal case
- 8.3"W x 23.7"D x 19.1"H (with handle)
- 210mm W x 602mm D x 485mm H
- 60 lb (27.1kg) max configuration
- 55-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 5.25", 1.6" high, external, open
 Bay 3: 5.25", 1.6" high, external, open
 Bay 4: 3.5", 1" high, external, std media reader
 Bay 5: 3.5", 1" high, internal, std disk
 Bay 6: 3.5", 1" high, internal, opt disk
 Bay 7: 3.5", 1" high, internal, opt disk
 Bay 8: 3.5", 1" high, internal, opt disk
 Bay 9: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x4 (x16 mechanical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-SEV sheet

ThinkStation® D20 (4158) - Windows 7 (April 2011)

Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adpdr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Win7 Global preload(mm/dd/yy)	Ann date
4158-M3U	6x9	1xX5650	2.66	6	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	None	1xQuadro 400	No	Pro 64 04/26/11
4158-M4U	6x9	1xE5603	1.60	4	1x2GB	1x500GB SATA	No	DVD±RW	1394	Media	None	1xQuadro NVS 300	No	Pro 64 04/26/11

- Faster, more efficient architecture with the latest Intel workstation technology
- High performance workstation with premium graphics for specialized professionals
- Environmentally friendly, cool, and quiet with rock solid engineering
- Innovative thermal design with optimized fan placement, for a cooler, quieter, more reliable PC
- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache Intel Xeon Processor X5650 with six-core , 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache													
Implementation	Two LGA1366 sockets, supports up to two processors													
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 													
Graphics	Some: NVIDIA® Quadro® NVS 300 , PCIe x16 adapter, 512MB, DMS59 to dual single-link DVI-I, 17.5W Some: NVIDIA Quadro 400 , PCIe x16 adapter, 512MB, one DisplayPort™, one dual-link DVI-I, 32W													
Media reader	Media card reader, internal USB 2.0													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Hard drive(s)	500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"													
SATA controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10;													
SAS controller	5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 10, integrated in Marvell® 88SE6480													
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O													
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)													
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in													
IEEE 1394 adpdr	FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear													
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec													
Speaker	Internal speaker for business audio													
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754													
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black													
Mouse	Optical Wheel Mouse (USB connector), black													
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified													
ThinkVantage®	Supports ThinkVantage technologies													
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)													
Preload OS	Genuine Windows® 7 Professional 64													
Preloaded applications (only some listed)	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 													

Tower

- Raven black color; metal case
- 8.3"W x 23.7"D x 19.1"H (with handle)
- 210mm W x 602mm D x 485mm H
- 60 lb (27.1kg) max configuration
- 55-liter
- Removable handle on top front
- Toolless side cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention
- Illuminated front icons
- Rack shelf support or optional rail kit

Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 5.25", 1.6" high, external, open
 Bay 3: 5.25", 1.6" high, external, open
 Bay 4: 3.5", 1" high, external, std media reader
 Bay 5: 3.5", 1" high, internal, std disk
 Bay 6: 3.5", 1" high, internal, opt disk
 Bay 7: 3.5", 1" high, internal, opt disk
 Bay 8: 3.5", 1" high, internal, opt disk
 Bay 9: 3.5", 1" high, internal, opt disk

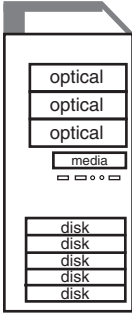
Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x4 (x16 mechanical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

<p>SECURITY</p> <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (front or all) • Chassis intrusion switch on selected model(s) 													
GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating													
More compatible accessories, please see O-SEV sheet													

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4158-N1U	6x9	2xX5687	3.60	8	3x2GB	1x450GB SAS	No	DVD±RW	1394	Media	Switch		Global	Pro 64	07/19/11
4158-N2U	6x9	1xX5660	2.80	6	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	Switch	1xQuadro 4000		Pro 64	07/19/11
4158-N3U	6x9	1xX5650	2.66	6	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	Switch	1xQuadro 2000	Global	Pro 64	07/19/11
4158-N4U	6x9	1xX5660	2.80	6	2x2GB	1x450GB SAS	No	DVD±RW	1394	Media	Switch	1xQuadro 4000		Pro 64	07/19/11

- Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	<p>Intel® Xeon® Processor X5650 with six-core. 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache</p> <p>Intel Xeon Processor X5660 with six-core. 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache</p> <p>Intel Xeon Processor X5687 with quad-core. 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache</p>										<p>Tower</p>  <ul style="list-style-type: none"> • Raven black color; metal case • 8.3"W x 23.7"D x 19.1"H (with handle) • 210mm W x 602mm D x 485mm H • 60 lb (27.1kg) max configuration • 55-liter • Removable handle on top front • Toolless side cover removal • Toolless disk and optical drive removal • Toolless adapter retention • Illuminated front icons • Rack shelf support or optional rail kit 					
Implementation	Two LGA1366 sockets, supports up to two processors															
Memory	48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets															
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors 															
Graphics	<p><i>Some:</i> NVIDIA® Quadro® 2000, PCIe x16 adapter, 1GB, two DisplayPort™, one dual-link DVI-I, 62W</p> <p><i>Some:</i> NVIDIA Quadro 4000, PCIe x16 adapter, 2GB, two DisplayPort, one dual-link DVI-I, one stereo, 142W</p>										<p>Bay 1: 5.25", 1.6" high, external, std optical</p> <p>Bay 2: 5.25", 1.6" high, external, open</p> <p>Bay 3: 5.25", 1.6" high, external, open</p> <p>Bay 4: 3.5", 1" high, external, std media reader</p> <p>Bay 5: 3.5", 1" high, internal, std disk</p> <p>Bay 6: 3.5", 1" high, internal, opt disk</p> <p>Bay 7: 3.5", 1" high, internal, opt disk</p> <p>Bay 8: 3.5", 1" high, internal, opt disk</p> <p>Bay 9: 3.5", 1" high, internal, opt disk</p>					
Media reader	Media card reader, internal USB 2.0															
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
Hard drive(s)	<p><i>Some:</i> 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"</p> <p><i>Some:</i> 450GB, SAS 3.0Gb/s, 15000 rpm, 3.5"</p>										<p>Slot 1: half-length, full-height, PCIe x1</p> <p>Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)</p> <p>Slot 3: full-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)</p> <p>Slot 5: full-length, full-height, PCIe x4 (x16 mechanical)</p> <p>Slot 6: half-length, full-height, 32-bit PCI 2.3</p>					
SATA controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10;															
SAS controller	5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 10, integrated in Marvell® 88SE6480										<p>* Adapters >75W use auxiliary power connector(s) from PSU</p>					
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O															
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)															
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in															
IEEE 1394 adptr	FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear															
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec															
Speaker	Internal speaker for business audio															
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754															
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black															
Mouse	Optical Wheel Mouse (USB connector), black															
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified															
ThinkVantage®	Supports ThinkVantage technologies															
Limited Warranty	3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet)															
Preload OS	Genuine Windows® 7 Professional 64															
Preloaded applications (only some listed)	<ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 										<p>SECURITY</p> <ul style="list-style-type: none"> • Security chip (see information on left) • Side cover lock (ships with two identical keys) • Padlock loop (in rear for opt padlock; padlock prohibits side cover removal) • Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal) • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (front or all) • Chassis intrusion switch on selected model(s) 					
											<p>GREENGUARD® certified</p> <p>RoHS-compliant</p> <p>EPEAT™ Gold rating</p>					
											More compatible accessories, please see O-SEV sheet					

ThinkStation® D20 (4158) - Windows 7 (August 2011)

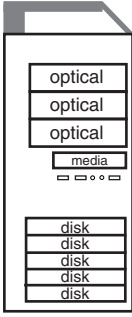
Personal Systems Reference(PSREF)

Type-model	Slot x bay	Processor(s)	GHz	Core	Memory DIMMs	Disk(s)	Pre-conf RAID	SATA optical	1394 adptr	Media reader	Chassis intrusion switch	Graphics adapter(s)	Global	Win7 preload	Ann date (mm/dd/yy)
4158-N5U	6x9	1xX5650	2.66	6	2x2GB	1x500GB SATA	No	DVD±RW	1394	Media	Switch	None	No	Pro 64	08/16/11

- Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Xeon® Processor X5650 with six-core. 6.4GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache Implementation Two LGA1366 sockets, supports up to two processors Memory 48GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets Additional memory disclaimers <ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed • Over six DIMMs requires dual processors Graphics None Media reader Media card reader, internal USB 2.0 Optical Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Hard drive(s) 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5" SATA controller 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 10, integrated in Marvell® 88SE6480 Chipset Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O Front ports Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a) Rear ports Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in IEEE 1394 adptr FireWire PCI adapter, 1394a-2000, 400Mbps, two 6-pin ports on rear Audio High Definition (HD) Audio, Analog Devices AD1988A codec Speaker Internal speaker for business audio Ethernet Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754 Security chip Broadcom Trusted Platform Module, TCG 1.2-compliant Keyboard Preferred Pro USB Keyboard (USB connector), 104-key, black Mouse Optical Wheel Mouse (USB connector), black Power supply 1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified ThinkVantage® Supports ThinkVantage technologies Limited Warranty 3-year parts and labor, Customer Replaceable Unit (CRU) parts only (More ThinkPlus® services are available on S-TS sheet) Preload OS Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) <ul style="list-style-type: none"> • Rescue and Recovery® • ThinkVantage System Update • ThinkVantage Toolbox • Norton® Internet Security (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft® Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW model(s) only) • Roxio MyDVD® (DVD±RW model(s) only) • Corel® WinDVD® (DVD and DVD±RW model(s) only) • Ulead® DVD MovieFactory® (Blu-ray model(s) only) 														
Implementation															

Tower



- Raven black color; metal case
- 8.3"W x 23.7"D x 19.1"H (with handle)
- 210mm W x 602mm D x 485mm H
- 60 lb (27.1kg) max configuration
- 55-liter
- Removable handle on top front
- Toolless side cover removal
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- Toolless adapter retention
- Illuminated front icons
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Bay 1: 5.25", 1.6" high, external, std optical
 Bay 2: 5.25", 1.6" high, external, open
 Bay 3: 5.25", 1.6" high, external, open
 Bay 4: 3.5", 1" high, external, std media reader
 Bay 5: 3.5", 1" high, internal, std disk
 Bay 6: 3.5", 1" high, internal, opt disk
 Bay 7: 3.5", 1" high, internal, opt disk
 Bay 8: 3.5", 1" high, internal, opt disk
 Bay 9: 3.5", 1" high, internal, opt disk

Slot 1: half-length, full-height, PCIe x1
 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 3: full-length, full-height, 32-bit PCI 2.3
 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max)
 Slot 5: full-length, full-height, PCIe x4 (x16 mechanical)
 Slot 6: half-length, full-height, 32-bit PCI 2.3

* Adapters >75W use auxiliary power connector(s) from PSU

SECURITY

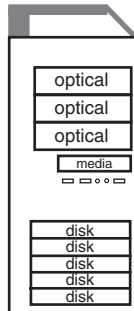
- Security chip (see information on left)
- Side cover lock (ships with two identical keys)
- Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)
- Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (front or all)
- Chassis intrusion switch on selected model(s)

GREENGUARD® certified
 RoHS-compliant
 EPEAT™ Gold rating

More compatible accessories, please see O-SEV sheet

Type-model	Slot x bay	Processor(s)	Base GHz	Cores	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-config RAID	SATA optical	Diskette or Media reader	Graphics adapter(s)	1394 adptry	Global	Avail date
4158-D6U	6x9	2xE5620	2.40	8	4x2GB	1333MHz	1x300GB ² SATA	2.5"		DVD±RW	Media		None	Global	Aug 10
4158-D7U	6x9	2xE5620	2.40	8	4x2GB	1333MHz	2x146GB SAS	3.5"	1	DVD±RW	Media		None	Global	Aug 10
4158-D8U	6x9	2xE5620	2.40	8	4x2GB	1333MHz	146GB+300GB SAS	3.5"		DVD±RW	Media	1xFX3800	None	Global	Aug 10
4158-D9U	6x9	2xE5640	2.66	8	4x2GB	1333MHz	1x300GB SATA	2.5"		DVD±RW	Media		None	Global	Aug 10
4158-E1U	6x9	2xX5650	2.66	12	4x2GB	1333MHz	1x300GB SATA	2.5"		DVD±RW	Media	1xFX4800	None	Global	Aug 10
4158-E2U	6x9	2xX5650	2.66	12	4x2GB	1333MHz	1x150GB SATA	2.5"		DVD±RW	Media	1xFX1800	None	Global	Aug 10
4158-E3U	6x9	2xX5660	2.80	12	4x2GB	1333MHz	1x300GB SAS	3.5"		DVD±RW	Media	1xFX4800	None	Global	Aug 10
4158-E4U	6x9	1xX5680	3.33	6	3x2GB	1333MHz	1x300GB SATA	2.5"		DVD±RW	Media	1xFX4800	None	Global	Aug 10
4158-E5U	6x9	1xX5677	3.46	4	3x2GB	1333MHz	1x300GB SATA	2.5"		DVD±RW	Media		None	Global	Aug 10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5620 or E5640 with quad-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5677 with quad-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650, X5660, or X5680 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache			Tower <ul style="list-style-type: none">• Raven black color; metal case• 8.3"W x 23.7"D x 19.1"H (with handle)• 210mm W x 602mm D x 485mm H• 60 lb (27.1kg) max configuration• 55-liter• Removable handle on top front• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons• Rack shelf support or optional rail kit 
Implementation	Two LGA1366 sockets			
Memory	6GB or 8GB std, 48GB max, UDIMM, PC3-10600 1333MHz DDR3**, ECC , 6-channel capable (3-channel per processor), twelve 240-pin DIMM sockets*** ** System automatically clocks down for processors with 1066MHz DDR3 memory controller *** Over six DIMMs requires dual processors			Bay ① 5.25", 1.6" high, external, std optical Bay ② 5.25", 1.6" high, external, open Bay ③ 5.25", 1.6" high, external, open Bay ④ 3.5", 1" high, external, std media reader Bay ⑤ 3.5", 1" high, internal, std disk Bay ⑥ 3.5", 1" high, internal, std or opt disk Bay ⑦ 3.5", 1" high, internal, opt disk Bay ⑧ 3.5", 1" high, internal, opt disk Bay ⑨ 3.5", 1" high, internal, opt disk
Graphics	Two PCI Express® x16 adapters required for quad monitor support, * Adapters >75W use auxiliary power connector(s) from PSU <i>Some:</i> NVIDIA® Quadro® FX 1800 , PCIe x16 adapter, 768MB, two DisplayPort, one dual-link DVI-I****, 59W <i>Some:</i> NVIDIA Quadro FX 3800 , PCIe x16 adapter, 1GB, two DisplayPort, one dual-link DVI-I****, 108W <i>Some:</i> NVIDIA Quadro FX 4800 , PCIe x16 adapter, 1.5GB, two slot width, two DisplayPort, one dual-link DVI-I****, 121W **** Only two display connectors are active at a time			Slot 1: half-length, full-height, PCIe x1 Slot 2: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 3: full-length, full-height, 32-bit PCI 2.3 Slot 4: full-length, full-height, PCIe 2.0 x16 (75W* max) Slot 5: full-length, full-height, PCIe x4 (x16 mechanical) Slot 6: half-length, full-height, 32-bit PCI 2.3
Diskette drive	None (use USB port)			SECURITY <ul style="list-style-type: none">• Security chip (see information on left)• Side cover lock (ships with two identical keys)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Administrator password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)
Media reader	20-in-1 media reader, internal USB 2.0			
SATA disk(s)	<i>Some:</i> 150GB or 300GB , SATA 3.0Gb/s, 10000 rpm, 2.5"			Supports ThinkVantage® technologies
SAS disk(s)	<i>Some:</i> 146GB or 300GB , SAS 3.0Gb/s, 15000 rpm, 3.5"			
SATA DVD±RW	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s			GREENGUARD® certified RoHS-compliant EPEAT™ Gold rating
Disk Controller	3 SATA connectors for opticals, SATA 3.0Gb/s, integrated in ICH10; 5 SATA/SAS ⁴ connectors for disks, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID ⁵ 0, 1, 5, 10, integrated in Marvell® 88SE6480			
Chipset	Intel 5520 Chipset , Intel ICH10, Winbond® W83627DHG-P Super I/O			LIMITED WARRANTY¹ <ul style="list-style-type: none">⇒ 3-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ ThinkPlus™ services available; see http://lenovo.com/thinkplus/warranty• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm), FireWire 400 (IEEE 1394a)			
Rear ports	Eight USB 2.0, eSATA, serial (9-pin), two ethernet (RJ-45), FireWire 400 (IEEE 1394a), six analog audio ports (line-in, mic-in, front-out, rear-out, center/sub-out, side out), Optical SPDIF digital out, Optical SPDIF digital in			
IEEE 1394 adptry	None			
Audio	High Definition (HD) Audio, Analog Devices AD1988A codec			
Speaker	Internal speaker for business audio			
Ethernet	Dual gigabit ethernet on planar, Broadcom® BCM5755 and BCM5754			
Security chip	Broadcom Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	1060 watts with 120mm bottom-mounted variable speed fan, universal, Climate Savers® Computing Bronze, 80 PLUS® Bronze qualified			
Cooling	Five fans max (power supply, first processor, second processor, rear, front disk)			
Rack mount	Rack shelf support or optional sliding rack mount rail kit support			
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Professional 64		Preloaded applications⁵ (only some listed) <ul style="list-style-type: none">• Microsoft Office 2010 preloaded; purchase product key to activate		

See footnotes for important warranty information

US models announced August 3, 2010

⚠ US models withdrawn effective December 2010 or February, May 2011

Memory Loading Notes on ThinkStation S20

System memory speed on ThinkStation D20 will be determined by a number of factors, including the microprocessor model and the type, speed, size (capacity), and number of DIMMs installed. Refer to the following table for information on the supported system memory speed for your ThinkStation model.

- ThinkStation S20 has six memory slots
- Memory controller is integrated in processor
- ThinkStation S20 has one processor slot
- ThinkStation S20 supports UDIMM only

Memory Speed Table for ThinkStation S20

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)		PC3-8500 UDIMM (1GB, 2GB)
Amount of DIMMs installed	1 to 3	4 to 6	1 to 6
CPU Model	Actual Memory Speed		
Intel® Xeon® E5502	800MHz	800MHz	800MHz
Intel Xeon E5503	800MHz	800MHz	800MHz
Intel Xeon E5504	800MHz	800MHz	800MHz
Intel Xeon E5506	800MHz	800MHz	800MHz
Intel Xeon E5507	800MHz	800MHz	800MHz
Intel Xeon E5520	1066MHz	1066MHz	1066MHz
Intel Xeon E5530	1066MHz	1066MHz	1066MHz
Intel Xeon E5540	1066MHz	1066MHz	1066MHz
Intel Xeon E5620	1066MHz	1066MHz	1066MHz
Intel Xeon E5630	1066MHz	1066MHz	1066MHz
Intel Xeon E5640	1066MHz	1066MHz	1066MHz
Intel Xeon X5550	1333MHz	1066MHz	1066MHz
Intel Xeon X5560	1333MHz	1066MHz	1066MHz
Intel Xeon X5570	1333MHz	1066MHz	1066MHz
Intel Xeon X5650	1333MHz	1333MHz	1066MHz
Intel Xeon X5660	1333MHz	1333MHz	1066MHz
Intel Xeon X5667	1333MHz	1333MHz	1066MHz
Intel Xeon X5670	1333MHz	1333MHz	1066MHz
Intel Xeon X5677	1333MHz	1333MHz	1066MHz
Intel Xeon X5680	1333MHz	1333MHz	1066MHz
Intel Xeon W3503	1066MHz	1066MHz	1066MHz
Intel Xeon W3505	1066MHz	1066MHz	1066MHz
Intel Xeon W3520	1066MHz	1066MHz	1066MHz
Intel Xeon W3530	1066MHz	1066MHz	1066MHz
Intel Xeon W3540	1066MHz	1066MHz	1066MHz
Intel Xeon W3550	1066MHz	1066MHz	1066MHz
Intel Xeon W3565	1066MHz	1066MHz	1066MHz
Intel Xeon W3570	1333MHz	1066MHz	1066MHz
Intel Xeon W3580	1333MHz	1066MHz	1066MHz
Intel Xeon W3680	1333MHz	1066MHz	1066MHz
Intel Xeon W5580	1333MHz	1066MHz	1066MHz
Intel Xeon W5590	1333MHz	1066MHz	1066MHz

For more information on ThinkStation S20 processor and memory accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/thinkstationaccessories

Memory Speed Table for ThinkStation S20

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)		PC3-8500 UDIMM (1GB, 2GB)
Amount of DIMMs installed	1 to 3	4 to 6	1 to 6
CPU Model	Actual Memory Speed		
Intel® Xeon® E5603	1066MHz	1066MHz	1066MHz
Intel Xeon E5606	1066MHz	1066MHz	1066MHz
Intel Xeon E5607	1066MHz	1066MHz	1066MHz
Intel Xeon E5645	1333MHz	1333MHz	1066MHz
Intel Xeon E5647	1066MHz	1066MHz	1066MHz
Intel Xeon E5649	1333MHz	1333MHz	1066MHz
Intel Xeon X5672	1333MHz	1333MHz	1066MHz
Intel Xeon X5675	1333MHz	1333MHz	1066MHz
Intel Xeon X5687	1333MHz	1333MHz	1066MHz
Intel Xeon X5690	1333MHz	1333MHz	1066MHz
Intel Xeon W3670	1066MHz	1066MHz	1066MHz
Intel Xeon W3690	1333MHz	1333MHz	1066MHz

For more information on ThinkStation S20 processor and memory accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkstationaccessories

Memory Loading Notes on ThinkStation D20

System memory speed on ThinkStation D20 will be determined by a number of factors, including the microprocessor model and the type, speed, size (capacity), and number of DIMMs installed. Refer to the following table for information on the supported system memory speed for your ThinkStation model.

- ThinkStation D20 has twelve memory slots; divided into two sets of 6-DIMM memory slots
- Memory controller is integrated in processor
- ThinkStation D20 has 2 processor slots, each processor control six DIMMs
- Over six DIMMs requires dual processor
- ThinkStation D20 supports UDIMM and RDIMM, mixing of UDIMM and RDIMM is not supported

Memory Speed Table for ThinkStation D20

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)		PC3-8500 UDIMM (1GB, 2GB)	PC3-10600 RDIMM (2GB, 4GB, 8GB)		PC3-8500 RDIMM (1GB, 2GB, 4GB)	PC3-8500 RDIMM (8GB)	
Amount of DIMMs installed per CPU bank	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6
CPU Model	Actual Memory Speed							
Intel® Xeon® E5502	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5503	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5504	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5506	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5507	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz	800MHz
Intel Xeon E5520	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5530	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5540	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5620	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5630	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5640	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5550	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5560	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5570	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5650	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5660	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5667	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5670	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5677	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5680	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon W5580	1333MHz	1066MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon W5590	1333MHz	1066MHz	1066MHz	1333MHz	1066MHz	1066MHz	1066MHz	800MHz

For more information on ThinkStation D20 processor and memory accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkstationaccessories

Memory Speed Table for ThinkStation D20

DIMM Type and Speed	PC3-10600 UDIMM (1GB, 2GB, 4GB)		PC3-8500 UDIMM (1GB, 2GB)	PC3-10600 RDIMM (2GB, 4GB, 8GB)		PC3-8500 RDIMM (1GB, 2GB, 4GB)	PC3-8500 RDIMM (8GB)	
Amount of DIMMs installed per CPU bank	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6	1 to 6	1 to 3	4 to 6
CPU Model	Actual Memory Speed							
Intel® Xeon® E5603	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5606	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5607	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5645	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon E5649	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5647	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5672	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5675	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5687	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz
Intel Xeon X5690	1333MHz	1333MHz	1066MHz	1333MHz	1333MHz	1066MHz	1066MHz	800MHz

For more information on ThinkStation D20 processor and memory accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkstationaccessories

Partial list of accessories supported on ThinkStation S20 and D20

Processors⁵⁵

D20:

Intel® Xeon® Quad-Core Processor E5506	57Y4399	ann	10/27/09
Intel Xeon Quad-Core Processor E5606	0A36531	ann	05/24/11
Intel Xeon Quad-Core Processor E5607	0A36532	ann	05/24/11
Intel Xeon Six-Core Processor E5645	0A36533	ann	05/24/11
Intel Xeon Six-Core Processor E5649	0A36534	ann	05/24/11

⁵⁵ Additional processor must match the existing processorMemory⁵³

All:

2GB PC3-8500 DDR3 ECC UDIMM	51J0504	ann	03/31/09
2GB PC3-10600 DDR3 ECC UDIMM ⁵⁴	43R2033	ann	03/31/09
4GB PC3-10600 DDR3 ECC UDIMM ⁵⁴	57Y4138	ann	08/04/09

D20:

2GB PC3-10600 DDR3 ECC RDIMM ⁵⁴	57Y4425	ann	04/13/10
4GB PC3-10600 DDR3 ECC RDIMM ⁵⁴	57Y4426	ann	04/13/10
8GB PC3-10600 DDR3 ECC RDIMM ⁵⁴	57Y4427	ann	04/13/10

⁵³ Mixing of UDIMM and RDIMM is not supported⁵⁴ Actual memory operating speed is the lowest installed speed, dependent on processor memory bus speed and PC3-8500 / PC3-10600 installed configuration

More information on memory and processor configuration, operation and limitation, please visit:

www.lenovo.com/support/thinkstationaccessories

Optical

DVD-ROM DL SATA1.5Gb/s 16X-48X Max ⁴	41N5618	ann	09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann	08/23/11
Blu-ray™ Burner SATA1.5Gb/s	45K1675	ann	03/31/09

Storage and removable storage

S20, D20 preconfigured with SATA disks:

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann	01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann	11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann	08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann	03/31/09

S20 preconfigured with SAS disks and the SAS controller,

D20 preconfigured with SAS disks:

450GB SAS 3.0Gb/s Disk (15000 rpm)	43N3424	ann	02/02/10
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All:

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08

Keyboard

Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
Lenovo Wireless Laser Mouse ⁵²	0A36188	ann	12/20/11

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

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

Monitors

ThinkVision®:

L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
LT1952p Wide 19" (VGA, DP, DVI-D) ⁶⁹	2448MB6	ann	09/13/11
L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
LT2252p Wide 22" (VGA, DP, DVI-D) ⁶⁹	2572MB6	ann	09/13/11
LT2452p Wide 24" (VGA, DP, DVI-D) ⁶⁹	4420MB2	ann	09/13/11

⁶⁹ DisplayPort cable is not included; use optional

DisplayPort to DisplayPort Monitor Cable (0A36537).

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

Monitor accessories⁴⁶

ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

Graphics

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann	08/05/08
DisplayPort to DisplayPort Monitor Cable ⁵⁰	0A36537	ann	09/13/11
NVIDIA® Quadro® 256MB NVS 295	45K1669	ann	04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59 ⁶⁵	0A36528	ann	04/26/11
NVIDIA Quadro 512MB NVS 450	57Y4398	ann	01/19/10
NVIDIA Quadro 512MB 400	0A36535	ann	06/28/11
NVIDIA Quadro 1GB 600	0A36183	ann	10/26/10
NVIDIA Quadro 1GB 2000	57Y4479	ann	10/26/10
NVIDIA Quadro 1GB 2000D	0A36541	ann	11/01/11
NVIDIA Quadro 2GB 4000	57Y4480	ann	10/26/10
NVIDIA Quadro 2.5GB 5000	57Y4481	ann	10/26/10

⁵⁰ Attaches to selected DisplayPort graphics cards.⁶⁵ Contains DMS59 to dual-DVI cable and DMS59 to dual-VGA cable.

D20:

NVIDIA SLI Connector ⁶⁰	55Y8963	ann	03/31/09
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⁶⁰ Compatible to Quadro 5000

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

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
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Rack mount accessories

D20:

ThinkStation C-Series, D-Series Rail Kit	57Y4482	ann	09/14/10
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For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

RAID* configuration table for ThinkStation

ThinkStation E20 (2 Disk Bays Maximum)					
Hard Drive Interface	Required Hard Drives	RAID 0	RAID 1	RAID 5	RAID 10
SATA	2	•	•		

ThinkStation C20 (3 Disk Bays Maximum)					
Hard Drive Interface	Required Hard Drives	RAID 0	RAID 1	RAID 5	RAID 10
SATA	2	•	•		
	3	•		•	

ThinkStation C20x (3 Disk Bays Maximum)					
Hard Drive Interface	Required Hard Drives	RAID 0	RAID 1	RAID 5	RAID 10
SATA	2	•	•		
	3	•		•	
SAS	2	•	•		
	3	•		•	

ThinkStation S20 (3 Disk Bays Maximum)					
Hard Drive Interface	Required Hard Drives	RAID 0	RAID 1	RAID 5	RAID 10
SATA	2	•	•		
	3			•	
SAS**	2	•	•		
	3			•	

ThinkStation D20 (5 Disk Bays Maximum)					
Hard Drive Interface	Required Hard Drives	RAID 0	RAID 1	RAID 5	RAID 10
SATA - Primary***	2	•	•		
	3	•		•	
	4	•		•	•
	4 (with spare)****			•	
	5	•		•	
	5 (with spare)				•
SATA - Secondary	2	•	•		
SAS - Primary	2	•	•		
	3	•		•	
	4	•		•	•
	4 (with spare)			•	
	5	•		•	
	5 (with spare)				•
SAS - Secondary	2	•	•		

* For all present ThinkStation, the total capacity in any RAID schemes can't exceed 2.2 TB (due to BIOS limitation).

** ThinkStation S20 does not contain onboard SAS controller, some models contain an additional SAS card (See SEV6-1 or SEV7-2).

*** ThinkStation D20 supports two RAID schemes simultaneously from 5 disk bays.

**** The spare disk is used to recover faulty hard disk from the RAID and cannot be used as a normal hard disk.

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:
<http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml>

<p>TopSeller service upgrade options for ThinkStation</p> <p>ThinkStation with 3-year Onsite warranty</p> <p>LOR = Lenovo Onsite Repair</p> <p>4-year LOR 9x5 Next Business Day 04W8713</p>	<p>TopSeller Priority Support</p> <ul style="list-style-type: none">• 24x7 support with priority routing and advanced level technicians <p>ThinkStation with 3-year Onsite warranty</p> <p>Add to 4-year warranty coverage - 4-year Priority Support* 04W8722</p> <p>* Covered machine must have concurrent warranty coverage.</p>
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Partial list of Lenovo® ThinkPlus Services⁷ for ThinkStation workstations

For more information see:
http://www.lenovo.com/services_warranty/us/en/index.html

ThinkPlus service upgrade options

ThinkStation workstation with 3-year Onsite warranty
LOR = Lenovo Onsite Repair

4-year LOR 9x5 Next Business Day	43R8983
5-year LOR 9x5 Next Business Day	43R8987

ThinkPlus Priority Support for enterprise customers

- 24x7 support with priority routing and advanced level technicians

ThinkStation workstation with 3-year Onsite warranty

3-year Priority Support	45J9081
4-year Priority Support	45J9082
5-year Priority Support	45J9083
3-year Priority Support 4-hour response	45J9084
4-year Priority Support 4-hour response	45J9085
5-year Priority Support 4-hour response	45J9086

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC, 27709, Attn: Dept ZPYA/B600. Lenovo makes no representation or warranty regarding third party products or services.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less.

³ **Systems with limited onsite service** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges.

⁴ **SATA/SAS:** The system configuration supports the installation of SATA, SAS, or mixing of SATA and SAS. But mixing of SATA and SAS disks into one RAID array will not be supported.

⁵ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.

⁷ **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

⁸ **RAID:** Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

RAID levels and requirements:

- **RAID 0 (striping)** provides increased performance by writing data across multiple drives.
- **RAID 1 (mirroring)** provides fault tolerance by writing the data on two drives.
- **RAID 5 (striping with parity)** uses distributed parity data to provide fault tolerance more efficiently than RAID 1. Requires three or more drives.
- **RAID 10 (or RAID 1+0)** combines RAID 1 and RAID 0 to create a stripe of mirrors that is fault tolerant while offering increased performance. Requires four drives.

⁹ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

ThinkStation

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ThinkServer™ TS130 (1106) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores / Threads	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)
1106-1EU	4x4	Core i3-2120	3.3	2C/4T	1x2GB	1333MHz	1x500GB	3.5"	No	2xDirect Cable	DVD±RW	Intel HD	None	280W

- **True server-class reliability and performance at desktop price**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 3-year limited warranty¹**

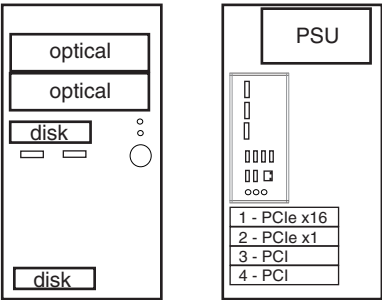
Processor	Intel® Core™ i3-2120 Processor (2C/4T, 3.3GHz, 3MB Cache), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)			<div><div>Tower</div><div><div><div>optical</div><div>optical</div><div>disk</div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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See footnotes for important warranty information
US model announced May 31, 2011

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Type-model	Slot x bay	Processor	GHz	Cores / Threads	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)
1105-15U 4x4		Core i3-2100	3.1	2C/4T	1x2GB	1333MHz	1x250GB	3.5"		2xDirect Cable	DVD	Intel HD		280W
1105-18U 4x4		Xeon E3-1225	3.1	4C/4T	1x2GB	1333MHz	1x250GB	3.5"		2xDirect Cable	DVD	Intel HD		280W
1105-19U 4x4		Xeon E3-1225	3.1	4C/4T	1x2GB	1333MHz	2x250GB	3.5"	1	2xDirect Cable	DVD	Intel HD	2008 Foundations	280W
1105-1AU 4x4		Xeon E3-1235	3.2	4C/8T	1x4GB	1333MHz	1x500GB	3.5"		2xDirect Cable	DVD	Intel HD		280W
1105-1BU 4x4		Xeon E3-1275	3.4	4C/8T	1x4GB	1333MHz	2x250GB	3.5"	1	2xDirect Cable	DVD	Intel HD		280W
1105-1CU 4x4		Xeon E3-1225	3.1	4C/4T	1x4GB	1333MHz	1x500GB	3.5"		2xDirect Cable	DVD	Intel HD		280W
1105-1DU 4x4		Xeon E3-1235	3.2	4C/8T	1x4GB	1333MHz	2x250GB	3.5"	1	2xDirect Cable	DVD	Intel HD	2008 Foundations	280W
1105-1EU 4x4		Xeon E3-1245	3.3	4C/8T	1x4GB	1333MHz	1x500GB	3.5"		2xDirect Cable	DVD	Intel HD		280W

- True server-class reliability and performance at desktop price
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty¹

Processor	Intel® Core™ i3-2100 Processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1225 processor (4C/4T, 3.1GHz, 6MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1235 processor (4C/8T, 3.2GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.6GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1245 processor (4C/8T, 3.3GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.7GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1275 processor (4C/8T, 3.4GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.8GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)	Tower 
Implementation	Processor in LGA1155 socket, up to one processor	<ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 16.0"D x 14.9"H• 175mm W x 407mm D x 377mm H• 24.7 lb (11.2kg) max configuration• 25-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets	Disk Bays Bay 1 5.25", 1.6" high, external, for optical Bay 2 5.25", 1.6" high, external, open (optical/tape) Bay 3 3.5", 1" high, internal, for disk Bay 4 3.5", 1" high, internal, for disk
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed	Expansion Slots Slot 1: half-length, full-height, PCI Express 2.0 x16 Slot 2: half-length, full-height, PCI Express 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI Slot 4: half-length, full-height, 32-bit PCI
Graphics	Intel HD Graphics in processor, one analog VGA DB-15 connector, one DisplayPort™ connector	Intel AMT Intel AMT 7.0 is supported on Xeon-model(s)
Disk bays	Two 3.5" SATA disk bays, no hot-swap, direct cable	Software Management Tools <ul style="list-style-type: none">• ThinkServer EasyStartup
SATA disk(s)	250GB or 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5"	Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: F1 at startup• Diagnostic: F2 at startup• Network Boot: F12 at startup• RAID Configuration Utility: Ctrl+I at startup
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max⁴ Drive	Security <ul style="list-style-type: none">• Security chip (see information on left)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	ENERGY STAR® Server 1.1-compliant RoHS-compliant
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	
Front ports	Two USB 2.0	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) one analog VGA DB-15, one DisplayPort	
Audio	High Definition (HD) Audio, Realtek ALC662 codec	
Ethernet	One gigabit ethernet on planar, Intel 82579LM	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Diagnostics	Two system status LEDs on front panel (disk drive activity, power/sleep)	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply	One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified	
Cooling	4 fans (power supply, CPU, rear, front)	
Preloaded Operating System Some: Genuine Windows Server® 2008 R2 Foundations		
Max internal capacity 4.0TB with two 2TB 3.5" SATA disks		
Limited Warranty¹ ➤ 1-year parts and labor ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ➤ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services ➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378		

See footnotes for important warranty information
 US models announced May 31, 2011

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 (TAM1-3) July 2011

ThinkServer™ TS130 (1105) - TopSeller (July 2011)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores / Threads	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)
1105-17U	4x4	Core i3-2100	3.1	2C/4T	1x2GB	1333MHz	None	3.5"	No	2xDirect Cable	DVD	Intel HD	None	280W
1105-20U	4x4	Xeon E3-1235	3.2	4C/8T	1x4GB	1333MHz	None	3.5"	No	2xDirect Cable	DVD	Intel HD	None	280W

- **True server-class reliability and performance at desktop price**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty¹**

Processor	Intel® Core™ i3-2100 Processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1235 processor (4C/8T, 3.2GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.6GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Processor in LGA1155 socket, up to one processor	<div><div><div>Tower</div><div><div><div>optical</div><div>optical</div><div>disk</div><div><div></div><div></div><div></div></div></div><div>disk</div></div></div><div><div><div>PSU</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>1 - PCIe x16</div><div>2 - PCIe x1</div><div>3 - PCI</div><div>4 - PCI</div></div></div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 16.0"D x 14.9"H• 175mm W x 407mm D x 377mm H• 24.7 lb (11.2kg) max configuration• 25-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons</div></div>
Implementation		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed	
Graphics	Intel HD Graphics in processor, one analog VGA DB-15 connector, one DisplayPort™ connector	
Disk bays	Two 3.5" SATA disk bays, no hot-swap, direct cable	
SATA disk(s)	None	
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive	
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	
Front ports	Two USB 2.0	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) one analog VGA DB-15, one DisplayPort	
Audio	High Definition (HD) Audio, Realtek ALC662 codec	
Ethernet	One gigabit ethernet on planar, Intel 82579LM	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Diagnostics	Two system status LEDs on front panel (disk drive activity, power/sleep)	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply	One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified	
Cooling	4 fans (power supply, CPU, rear, front)	

Max internal capacity	
4.0TB with two 2TB 3.5" SATA disks	
Limited Warranty¹	
<div><div>➤ 1-year parts and labor</div><div>➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>➤ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services</div><div>➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div>	
ENERGY STAR® Server 1.1-compliant RoHS-compliant	

See footnotes for important warranty information
 US models announced July 12, 2011

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Type-model	Slot x bay	Processor	GHz	Cores / Threads	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)
1105-36U	4x4	Xeon E3-1225	3.1	4C/4T	1x4GB	1333MHz	2x500GB	3.5"	1	2xDirect Cable	DVD	Intel HD	2008 Foundations	280W
1105-37U	4x4	Core i3-2120	3.3	2C/4T	1x2GB	1333MHz	1x500GB	3.5"		2xDirect Cable	DVD	Intel HD		280W
1105-38U	4x4	Xeon E3-1275	3.4	4C/8T	1x4GB	1333MHz		3.5"		2xDirect Cable	DVD	Intel HD		280W

- True server-class reliability and performance at desktop price
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty¹

Processor	Intel® Core™ i3-2120 Processor (2C/4T, 3.3GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1225 processor (4C/4T, 3.1GHz, 6MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1275 processor (4C/8T, 3.4GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.8GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)	<div><div>Tower</div><div><div><div>optical</div><div>optical</div><div>disk</div><div><div></div><div></div><div></div></div><div>disk</div></div><div><div>PSU</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>1 - PCIe x16</div><div>2 - PCIe x1</div><div>3 - PCI</div><div>4 - PCI</div></div></div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 16.0"D x 14.9"H• 175mm W x 407mm D x 377mm H• 24.7 lb (11.2kg) max configuration• 25-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons</div></div>
Implementation	Processor in LGA1155 socket, up to one processor	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed	
Graphics	Intel HD Graphics in processor, one analog VGA DB-15 connector, one DisplayPort™ connector	
Disk bays	Two 3.5" SATA disk bays, no hot-swap, direct cable	
SATA disk(s)	<i>Some:</i> 500GB , SATA 3.0Gb/s, 7200 rpm, 3.5"	
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max⁴ Drive	
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	
Front ports	Two USB 2.0	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) one analog VGA DB-15, one DisplayPort	
Audio	High Definition (HD) Audio, Realtek ALC662 codec	
Ethernet	One gigabit ethernet on planar, Intel 82579LM	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Diagnostics	Two system status LEDs on front panel (disk drive activity, power/sleep)	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply	One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified	
Cooling	4 fans (power supply, CPU, rear, front)	

Preloaded Operating System <i>Some:</i> Genuine Windows Server® 2008 R2 Foundations	
Max internal capacity 4.0TB with two 2TB 3.5" SATA disks	
Limited Warranty¹ ➤ 1-year parts and labor ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ➤ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services ➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	

Security <ul style="list-style-type: none">• Security chip (see information on left)• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)• Power-on password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)	
ENERGY STAR® Server 1.1-compliant RoHS-compliant	

Type-model	Slot x bay	Processor	GHz	Cores / Threads	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)
1100-12U	4x4	Xeon E3-1225	3.1	4C/4T	1x2GB	1333MHz	1x250GB	3.5"	No	2xDirect Cable	DVD	Intel HD	None	280W

- **True server-class reliability and performance at desktop price**
- **This model has a 3-year limited warranty¹**

Processor	Intel® Xeon® E3-1225 processor (4C/4T, 3.1GHz, 6MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)	<div><div><div>Tower</div><div><div><div>optical</div><div>optical</div><div>disk</div><div><div></div><div></div><div></div></div><div>disk</div></div></div><div><div><div>PSU</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>1 - PCIe x16</div><div>2 - PCIe x1</div><div>3 - PCI</div><div>4 - PCI</div></div></div></div></div></div></div>
Implementation	Processor in LGA1155 socket, up to one processor	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets	
Additional memory disclaimers	<ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed	
Graphics	Intel HD Graphics in processor, one analog VGA DB-15 connector, one DisplayPort™ connector	
Disk bays	Two 3.5" SATA disk bays, no hot-swap, direct cable	
SATA disk(s)	250GB , SATA 3.0Gb/s, 7200 rpm, 3.5"	
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive	
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	
Front ports	Two USB 2.0	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) one analog VGA DB-15, one DisplayPort	
Audio	High Definition (HD) Audio, Realtek ALC662 codec	
Ethernet	One gigabit ethernet on planar, Intel 82579LM	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Diagnostics	Two system status LEDs on front panel (disk drive activity, power/sleep)	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply	One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified	
Cooling	4 fans (power supply, CPU, rear, front)	

Disk Bays		
Bay 1	5.25", 1.6" high,	external, for optical
Bay 2	5.25", 1.6" high,	external, open (optical/tape)
Bay 3	3.5", 1" high,	internal, for disk
Bay 4	3.5", 1" high,	internal, for disk

Expansion Slots		
Slot 1: half-length, half-height, PCI Express 2.0 x16		
Slot 2: half-length, full-height, PCI Express 2.0 x1		
Slot 3: half-length, full-height, 32-bit PCI		
Slot 4: half-length, full-height, 32-bit PCI		

Intel AMT		
Intel AMT 7.0 is supported on Xeon-model(s)		

Software Management Tools		
• ThinkServer EasyStartup		

Power-On Hotkey		
• Setup Utility: F1 at startup		
• Diagnostic: F2 at startup		
• Network Boot: F12 at startup		
• RAID Configuration Utility: Ctrl+I at startup		

Security		
• Security chip (see information on left)		
• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)		
• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)		
• Power-on password		
• Boot sequence control		
• Boot without keyboard, mouse, diskette		
• Serial port I/O control		
• USB port disablement (front or all)		

ENERGY STAR® Server 1.1-compliant		
RoHS-compliant		

Max internal capacity		
4.0TB with two 2TB 3.5" SATA disks		
Limited Warranty¹		
➤ 3-year parts and labor		
➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)		
➤ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty		
• Onsite service upgrade options (in eligible locations)⁷		
• Post warranty maintenance services		
➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378		

Type-model	Slot x bay	Processor	Cores / Threads	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)
1098-12U	4x4	Core i3-2100	3.1 2C/4T	1x2GB	1333MHz	1x250GB	3.5"	No	2xDirect Cable	DVD	Intel HD	None	280W

- **True server-class reliability and performance at desktop price**
- **This model has a 1-year limited warranty¹**

Processor	Intel® Core™ i3-2100 Processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)	<div><div><div>optical</div><div>optical</div><div>disk</div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><d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Type-model	Slot x bay	Processor	GHz	Cores / Threads	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)
1098-30U	4x4	Xeon E3-1225	3.1	4C/4T	1x2GB	1333MHz	No	3.5"	No	2xDirect Cable	DVD	Intel HD	None	280W
1098-31U	4x4	Core i3-2120	3.3	2C/4T	1x2GB	1333MHz	No	3.5"	No	2xDirect Cable	DVD	Intel HD	None	280W

- **True server-class reliability and performance at desktop price**
- **These models have a 1-year limited warranty¹**

Processor	Intel® Core™ i3-2120 Processor (2C/4T, 3.3GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1225 processor (4C/4T, 3.1GHz, 6MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Processor in LGA1155 socket, up to one processor	<div><div><div>optical</div><div>optical</div><div>disk</div><div><div></div><div></div><div></div></div><div>disk</div></div><div><div>PSU</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>1 - PCIe x16</div><div>2 - PCIe x1</div><div>3 - PCI</div><div>4 - PCI</div></div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 16.0"D x 14.9"H• 175mm W x 407mm D x 377mm H• 24.7 lb (11.2kg) max configuration• 25-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons</div></div>
Implementation		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets <ul style="list-style-type: none">• Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed	
Additional memory disclaimers		
Graphics	Intel HD Graphics in processor, one analog VGA DB-15 connector, one DisplayPort™ connector	
Disk bays	Two 3.5" SATA disk bays, no hot-swap, direct cable	
SATA disk(s)	None	
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive	
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA 6.0Gb/s connectors, two SATA 3.0Gb/s connectors	
Chipset	Intel C206 Chipset , Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB)	
Front ports	Two USB 2.0	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) one analog VGA DB-15, one DisplayPort	
Audio	High Definition (HD) Audio, Realtek ALC662 codec	
Ethernet	One gigabit ethernet on planar, Intel 82579LM	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Diagnostics	Two system status LEDs on front panel (disk drive activity, power/sleep)	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply	One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified	
Cooling	4 fans (power supply, CPU, rear, front)	

Disk Bays	
Bay 1	5.25", 1.6" high, external, for optical
Bay 2	5.25", 1.6" high, external, open (optical/tape)
Bay 3	3.5", 1" high, internal, for disk
Bay 4	3.5", 1" high, internal, for disk

Expansion Slots	
Slot 1:	half-length, full-height, PCI Express 2.0 x16
Slot 2:	half-length, full-height, PCI Express 2.0 x1
Slot 3:	half-length, full-height, 32-bit PCI
Slot 4:	half-length, full-height, 32-bit PCI

Intel AMT	
Intel AMT 7.0 is supported on Xeon-model(s)	
Software Management Tools	
• ThinkServer EasyStartup	
Power-On Hotkey	
• Setup Utility: F1 at startup	
• Diagnostic: F2 at startup	
• Network Boot: F12 at startup	
• RAID Configuration Utility: Ctrl+I at startup	
Security	
• Security chip (see information on left)	
• Padlock loop (in rear for opt padlock; padlock prohibits side cover removal)	
• Security slot (in rear for optional Kensington® Microsaver® cable; prohibits side cover removal)	
• Power-on password	
• Boot sequence control	
• Boot without keyboard, mouse, diskette	
• Serial port I/O control	
• USB port disablement (front or all)	
ENERGY STAR® Server 1.1-compliant	
RoHS-compliant	

Max internal capacity	
4.0TB with two 2TB 3.5" SATA disks	
Limited Warranty¹	
➤ 1-year parts and labor	
➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)	
➤ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty	
• Onsite service upgrade options (in eligible locations)⁷	
• Post warranty maintenance services	
➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	

Partial list of accessories supported on Lenovo® ThinkServer TS130.

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at:
bplocator.lenovo.com

Memory

2GB PC3-10600 DDR3 ECC UDIMM (1Rx8)	67Y2606	ann 05/17/11
4GB PC3-10600 DDR3 ECC UDIMM (2Rx8)	67Y2607	ann 05/17/11

Backup

Lenovo 160GB Internal USB RDX Bundle	67Y1394	ann 02/23/10
Lenovo 320GB Internal USB RDX Bundle	67Y1396	ann 02/23/10
Lenovo 500GB Internal USB RDX Bundle	67Y1398	ann 02/23/10
Lenovo 160GB RDX Data Cartridge	67Y1395	ann 02/23/10
Lenovo 320GB RDX Data Cartridge	67Y1397	ann 02/23/10
Lenovo 500GB RDX Data Cartridge	67Y1399	ann 02/23/10

Connectivity

Intel PRO/1000 PT Dual Port Ethernet	67Y1393	ann 02/23/10
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Disk Drive⁶

3.5" SATA Cabled:

250GB ² 3.5" Enterprise SATA (7200 rpm)	67Y2612	ann 05/17/11
500GB 3.5" Enterprise SATA (7200 rpm)	67Y2613	ann 05/17/11
1TB 3.5" Enterprise SATA (7200 rpm)	67Y2614	ann 05/17/11
2TB 3.5" Enterprise SATA (7200 rpm)	67Y2615	ann 05/17/11

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
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Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
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For more information on server accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/thinkserveraccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services for ThinkServer TS130

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

Training classes

- The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

Online Training, Understanding Lenovo Servers	45K4080
Online Training, Understanding Systems Management	45K4081
Installation, ThinkServer Hardware Only	45K4082

ThinkPlus service upgrade options⁷

LOR = Lenovo Onsite Repair

TS130 with 1-year warranty

3-year LOR 9x5 Next Business Day	45K4055
4-year LOR 9x5 Next Business Day	51J0723
5-year LOR 9x5 Next Business Day	51J0725

TS130 with 3-year warranty

4-year LOR 9x5 Next Business Day	51J0727
5-year LOR 9x5 Next Business Day	51J0729

ThinkPlus Priority Support

- 24x7 support with priority routing and advanced level technicians

TS130 with 3-year warranty

3-year Priority Support	45K4060
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ThinkPlus Priority Support with Hard Disk Drive Retention

- 24x7 support with priority routing and advanced level technicians
- Hard Disk Drive Retention (HDDR) means customer keeps disk

TS130 with 3-year warranty

3-year Priority Support with HDDR	45K5443
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ThinkPlus Productivity

- Priority Support
- Online Training, Understanding Lenovo Servers
- One-time hardware installation

3-year ThinkPlus Productivity, TS130(3-year)	45K4086
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Type-model	Slot x bay	Processor	GHz	Cores	Memory DIMMs	Memory speed	Disk(s)	Disk size	Pre-conf RAID	Disk bays	SATA optical	Graphics adapter(s)	Windows Server preload	Power supply(s)	Avail date
0981-11U	4x4	G1101	2.26	2	1x1GB	1333MHz	1x250GB ²	3.5"		2xDirect Cable	DVD	Intel HD		280W	Mar 10
0981-12U	4x4	G6950	2.80	2	1x2GB	1333MHz	1x250GB	3.5"		2xDirect Cable	DVD	Intel HD		280W	Mar 10
0981-18U	4x4	i5-650	3.20	2	1x2GB	1333MHz	2x250GB	3.5"	1	2xDirect Cable	DVD	Intel HD	2008 Foundations	280W	Mar 10
0981-19U	4x4	i5-650	3.20	2	1x2GB	1333MHz	1x500GB	3.5"		2xDirect Cable	DVD±RW	Intel HD		280W	Mar 10
0981-1AU	4x4	G6950	2.80	2	1x2GB	1333MHz	2x250GB	3.5"	1	2xDirect Cable	DVD	Intel HD	2008 Foundations	280W	Mar 10
0981-1BU	4x4	i5-650	3.20	2	2x2GB	1333MHz	2x250GB	3.5"	1	2xDirect Cable	DVD±RW	Intel HD	2008 SBS Std	280W	Jul 10
0981-1CU	4x4	X3450	2.66	4	1x2GB	1333MHz	1x500GB	3.5"		2xDirect Cable	DVD±RW	FX380		280W	Nov 10
0981-1DU	4x4	G6960	2.93	2	1x2GB	1333MHz	1x250GB	3.5"		2xDirect Cable	DVD	Intel HD		280W	Mar 11

• These models have a 1-year limited warranty¹

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Processor	Intel® Celeron® Processor G1101* with dual-core, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, and 2MB cache or Intel Pentium® Processor G6950 or G6960 with dual-core, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, and 3MB cache or Intel Core™ i5 Processor i5-650 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Xeon® Processor X3450 with quad-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, TXT, Turbo Boost Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache * Intel Celeron Processor G1101 is not recommended for applications requiring more than 5 clients or high web volume Processor in LGA1156 socket, up to one processor			<div><div>Tower</div><div><div><div><div>optical</div><div>optical</div><div>disk</div><div></div><div></div></div><div></div><div>disk</div></div><div><div>PSU</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>1 - PCIe x16</div><div>2 - PCIe x1</div><div>3 - PCI</div><div>4 - PCI</div></div></div></div></div><div><ul style="list-style-type: none">• Raven black color; metal case• 6.9"W x 16.0"D x 14.9"H• 175mm W x 407mm D x 377mm H• 24.7 lb (11.2kg) max configuration• 25-liter• Toolless side cover removal• Toolless disk and optical drive removal• Toolless adapter retention• Illuminated front icons</div></div>																		
Implementation																						
Memory	1GB, 2GB, or 4GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3** , ECC, four 240-pin DIMM sockets ** System automatically clocks down for processors with 1066MHz DDR3 memory controller																					
Graphics	Some: Intel HD Graphics in processor, one analog VGA DB-15 connector, one DisplayPort™ connector Some: NVIDIA® Quadro® FX 380, PCIe x16 adapter, 256MB, two dual-link DVI-I, includes DVI to VGA converter, 35W			<div>Disk Bays</div> <table><tr><td>Bay 1</td><td>5.25", 1.6" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>5.25", 1.6" high,</td><td>external,</td><td>optional optical</td></tr><tr><td>Bay 3</td><td>3.5", 1" high,</td><td>external,</td><td>std disk</td></tr><tr><td>Bay 4</td><td>3.5", 1" high,</td><td>external,</td><td>std or opt disk</td></tr></table>			Bay 1	5.25", 1.6" high,	external,	std optical	Bay 2	5.25", 1.6" high,	external,	optional optical	Bay 3	3.5", 1" high,	external,	std disk	Bay 4	3.5", 1" high,	external,	std or opt disk
Bay 1	5.25", 1.6" high,	external,	std optical																			
Bay 2	5.25", 1.6" high,	external,	optional optical																			
Bay 3	3.5", 1" high,	external,	std disk																			
Bay 4	3.5", 1" high,	external,	std or opt disk																			
Disk bays	Two 3.5" SATA disk bays, no hot-swap, direct cable																					
SATA disk(s)	250GB or 500GB, SATA 3.0Gb/s, 7200 rpm, 3.5"																					
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive																					
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0, 1 support, two SATA connectors for disks, two SATA connectors for opticals																					
Chipset	Intel 3450 Chipset, Platform Controller Hub (PCH) for PCI, ethernet, and USB																					
Front ports	Two USB 2.0																					
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in) Intel HD model(s): one analog VGA DB-15, one DisplayPort																					
Ethernet	One gigabit ethernet on planar, Intel 82578DM																					
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																					
Diagnostics	Two system status LEDs on front panel (disk drive activity, power/sleep)																					
Keyboard	None (use USB port)																					
Mouse	None (use USB port)																					
Power supply	One 280 watts standard, one maximum, autosensing, no hot-swap, no redundancy, 85% PSU, 80 PLUS® Bronze qualified																					
Cooling	4 fans (power supply, CPU, rear, front)																					
Rack mount	Rack shelf support																					
<div>Accessories</div> <table><tr><td>1GB PC3-10600 DDR3 ECC UDIMM</td><td>67Y1387</td></tr><tr><td>2GB PC3-10600 DDR3 ECC UDIMM</td><td>67Y1388</td></tr><tr><td>500GB 3.5" SATA Cabled (7200 rpm)</td><td>67Y1401</td></tr></table> <div>More accessories on O-RED sheet</div>				1GB PC3-10600 DDR3 ECC UDIMM	67Y1387	2GB PC3-10600 DDR3 ECC UDIMM	67Y1388	500GB 3.5" SATA Cabled (7200 rpm)	67Y1401													
1GB PC3-10600 DDR3 ECC UDIMM	67Y1387																					
2GB PC3-10600 DDR3 ECC UDIMM	67Y1388																					
500GB 3.5" SATA Cabled (7200 rpm)	67Y1401																					
Other accessories at lenovo.com/accessories																						
<div>Limited Warranty¹</div> <div><div>⇒ 1-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div>																						
				<div>Preloaded Operating System</div> <div>Some: Genuine Windows Server® 2008 R2 Foundations</div> <div>Some: Genuine Windows Small Business Server 2008 Standard SP2</div>																		
				<div>ENERGY STAR® Server 1.0-compliant</div> <div>RoHS-compliant</div>																		

See footnotes for important warranty information

US model announced March 8, 2011; previous models on February 23, March 9, July 6, or November 2, 2010

US models withdrawn effective February or April 2011

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(RED1-1) March 2011

Partial list of accessories supported on Lenovo® ThinkServer TS200v.

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at:
bplocator.lenovo.com

Memory

1GB PC3-10600 DDR3 ECC UDIMM	67Y1387	ann 02/23/10
2GB PC3-10600 DDR3 ECC UDIMM	67Y1388	ann 02/23/10
4GB PC3-10600 DDR3 ECC UDIMM	67Y1389	ann 02/23/10

Backup

Lenovo 160GB Internal USB RDX Bundle	67Y1394	ann 02/23/10
Lenovo 320GB Internal USB RDX Bundle	67Y1396	ann 02/23/10
Lenovo 500GB Internal USB RDX Bundle	67Y1398	ann 02/23/10
Lenovo 160GB RDX Data Cartridge	67Y1395	ann 02/23/10
Lenovo 320GB RDX Data Cartridge	67Y1397	ann 02/23/10
Lenovo 500GB RDX Data Cartridge	67Y1399	ann 02/23/10

Connectivity

Intel PRO/1000 PT Dual Port Ethernet	67Y1393	ann 02/23/10
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Disk Drive**3.5" SATA Cabled:**

250GB ² 3.5" SATA (7200 rpm)	67Y1400	ann 02/23/10
500GB 3.5" SATA (7200 rpm)	67Y1401	ann 02/23/10
1TB 3.5" SATA (7200 rpm)	67Y1402	ann 02/23/10

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
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Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
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For more information on server accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/thinkserveraccessories

www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services for ThinkServer TS200v

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

Training classes

- The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

Online Training, Understanding Lenovo Servers	45K4080
Online Training, Understanding Systems Management	45K4081
Installation, ThinkServer Hardware Only	45K4082

ThinkPlus service upgrade options⁷

LOR = Lenovo Onsite Repair

TS200v with 1-year warranty

3-year LOR 9x5 Next Business Day	45K4055
4-year LOR 9x5 Next Business Day	51J0723
5-year LOR 9x5 Next Business Day	51J0725

TS200v with 3-year warranty

4-year LOR 9x5 Next Business Day	51J0727
5-year LOR 9x5 Next Business Day	51J0729

ThinkPlus Priority Support

- 24x7 support with priority routing and advanced level technicians

TS200v with 3-year warranty

3-year Priority Support	45K4060
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ThinkPlus Priority Support with Hard Disk Drive Retention

- 24x7 support with priority routing and advanced level technicians
- Hard Disk Drive Retention (HDDR) means customer keeps disk

TS200v with 3-year warranty

3-year Priority Support with HDDR	45K5443
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ThinkPlus Productivity

- Priority Support
- Online Training, Understanding Lenovo Servers
- One-time hardware installation

3-year ThinkPlus Productivity, TS200v (3-year)	45K4086
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ThinkServer™



Lenovo ThinkServer TS430
(Four 3.5" Hot-swap and Fixed PSU)



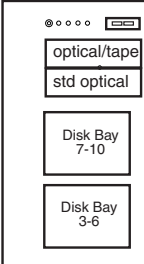
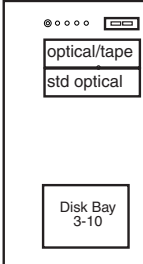
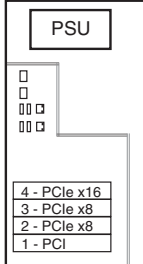
Lenovo ThinkServer TS430
(Redundant PSU)



Lenovo ThinkServer TS430

Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0390-11U	4x6	Xeon E3-1220	3.1 4C/4T	1x2GB	3.5"	4x Hot-swap	Intel PCH	SATA	0/1/10	DVD±RW	IPMI	None	TPM	1x Fixed
0390-12U	4x6	Xeon E3-1220	3.1 4C/4T	1x2GB	3.5"	4x Hot-swap	9240-8i v2	SATA/SAS	0/1/10	DVD±RW	IPMI	None	TPM	1x Fixed
0390-13U	4x6	Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4x Hot-swap	Intel PCH	SATA	0/1/10	DVD±RW	IPMI	None	TPM	1x Fixed

- **Highly Reliable:** ECC memory and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- 3-year limited warranty¹
- Part of the US TopSeller™ Program

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) One LGA1155 socket													
Implementation	One LGA1155 socket													
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 													
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz													
Disk bays	Some: Four 3.5" hot-swap (HS) SATA disk bays Some: Four 3.5" hot-swap (HS) SATA/SAS disk bays													
Disk controller	Intel PCH: Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support 9240-8i v2: ThinkServer RAID 9240-8i v2 RAID adapter, PCIe bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support													
Tape drive	Supports optional tape drive via internal USB 2.0 connector													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Diskette	None (use USB port)													
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)													
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM													
Extender card	None													
Front ports	Two USB 2.0													
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector													
Diagnostics	System status LEDs on front; DIT model(s): add-on Doctor Inside Technology (DIT) module for advanced diagnostics													
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); KVM model(s): add-on KVM card for KVM functions													
Security chip	No onboard TPM chip; TPM model(s): additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	Monitor, SATA/SAS disk, OS													
Keyboard	None (use USB port)													
Mouse	None (use USB port)													
Power supply	One fixed 400 watts standard, universal, 80 PLUS® Bronze qualified													
Mechanical	Tower, business black color, metal case													
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm													
System weight	61.7 lb (28kg) max configuration													
Tool-less	Side cover removal, disk and optical drive removal, system fan removal													
Rack mount	Rack-mountable to 5U													
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks													
Limited warranty	3-year parts and labor; more ThinkPlus™ information see S-TOR sheet													
Accessories	For more accessories, see O-TOR sheet													
								Front - 3.5" disk bay 						
								Front - 2.5" disk bay 						
								Rear 						
								3.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 3.5", 1" high, external, for disk Bay 4 3.5", 1" high, external, for disk Bay 5 3.5", 1" high, external, for disk Bay 6 3.5", 1" high, external, for disk Bay 7-10 are available on Eight 3.5" disk bay models: Bay 7 3.5", 1" high, external, for disk Bay 8 3.5", 1" high, external, for disk Bay 9 3.5", 1" high, external, for disk Bay 10 3.5", 1" high, external, for disk						
								2.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 2.5", 0.6" high, external, for disk Bay 4 2.5", 0.6" high, external, for disk Bay 5 2.5", 0.6" high, external, for disk Bay 6 2.5", 0.6" high, external, for disk Bay 7 2.5", 0.6" high, external, for disk Bay 8 2.5", 0.6" high, external, for disk Bay 9 2.5", 0.6" high, external, for disk Bay 10 2.5", 0.6" high, external, for disk						
								Slot 1 half-length, full-height, 32-bit PCI 2.3 Slot 2 half-length, full-height, PCI Express 2.0 x8* Slot 3 half-length, full-height, PCI Express 2.0 x8 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU) * x4 electrical ** x8 electrical						
								Software Management Tools • ThinkServer EasyStartup • ThinkServer EasyManage						
								Security • Security chip (selected models, see information on left) • Administrator password • User password • Front panel key lock • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)						
								RoHS-compliant						

ThinkServer™ TS430 Fixed PSU (0389) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0389-11U	4x6	Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4 x Direct Cable	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x Fixed

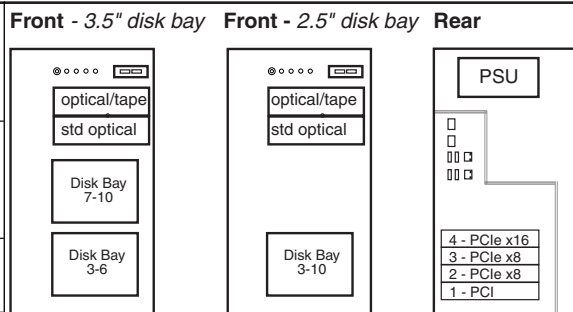
- **Highly Reliable:** ECC memory and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **1-year limited warranty¹**
- **Part of the US TopSeller™ Program**

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)	<div>Front - 3.5" disk bay</div> <div>Front - 2.5" disk bay</div> <div>Rear</div> <div>3.5" disk bay models:</div> <div>Bay 1 5.25", 1.6" high, external, open (optical/tape)</div> <div>Bay 2 5.25", 1.6" high, external, std optical</div> <div>Bay 3 3.5", 1" high, external, for disk</div> <div>Bay 4 3.5", 1" high, external, for disk</div> <div>Bay 5 3.5", 1" high, external, for disk</div> <div>Bay 6 3.5", 1" high, external, for disk</div> <div>Bay 7-10 are available on Eight 3.5" disk bay models:</div> <div>Bay 7 3.5", 1" high, external, for disk</div> <div>Bay 8 3.5", 1" high, external, for disk</div> <div>Bay 9 3.5", 1" high, external, for disk</div> <div>Bay 10 3.5", 1" high, external, for disk</div> <div>2.5" disk bay models:</div> <div>Bay 1 5.25", 1.6" high, external, open (optical/tape)</div> <div>Bay 2 5.25", 1.6" high, external, std optical</div> <div>Bay 3 2.5", 0.6" high, external, for disk</div> <div>Bay 4 2.5", 0.6" high, external, for disk</div> <div>Bay 5 2.5", 0.6" high, external, for disk</div> <div>Bay 6 2.5", 0.6" high, external, for disk</div> <div>Bay 7 2.5", 0.6" high, external, for disk</div> <div>Bay 8 2.5", 0.6" high, external, for disk</div> <div>Bay 9 2.5", 0.6" high, external, for disk</div> <div>Bay 10 2.5", 0.6" high, external, for disk</div> <div>Slot 1 half-length, full-height, 32-bit PCI 2.3</div> <div>Slot 2 half-length, full-height, PCI Express 2.0 x8*</div> <div>Slot 3 half-length, full-height, PCI Express 2.0 x8</div> <div>Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU)</div> <div>* x4 electrical</div> <div>** x8 electrical</div> <div>Software Management Tools</div> <div>• ThinkServer EasyStartup</div> <div>• ThinkServer EasyManage</div> <div>Security</div> <div>• Security chip (selected models, see information on left)</div> <div>• Administrator password</div> <div>• User password</div> <div>• Front panel key lock</div> <div>• Boot sequence control</div> <div>• Boot without keyboard, mouse, diskette</div> <div>• Serial port I/O control</div> <div>• USB port disablement (all)</div> <div>RoHS-compliant</div>
Implementation	One LGA1155 socket	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets	
Additional memory disclaimers	<ul style="list-style-type: none">Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed	
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz	
Disk bays	Four 3.5" SATA disk bays, no hot-swap, direct cable	
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID® 0, 1, 10 support	
Tape drive	Supports optional tape drive via internal USB 2.0 connector	
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive	
Diskette	None (use USB port)	
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)	
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM	
Extender card	None	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector	
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics	
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions	
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant	
Prerequisites	Monitor, SATA/SAS disk, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply	One fixed 400 watts standard, universal, 80 PLUS® Bronze qualified	
Mechanical	Tower, business black color, metal case	
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm	
System weight	61.7 lb (28kg) max configuration	
Tool-less	Side cover removal, disk and optical drive removal, system fan removal	
Rack mount	Rack-mountable to 5U	
Max internal capacity	<i>4x3.5" SATA (DC/HS):</i> 8.0TB with four 2TB 3.5" SATA disks <i>8x3.5" SATA (HS):</i> 16.0TB with eight 2TB 3.5" SATA disks <i>4x3.5" SAS (HS):</i> 2.4TB with four 600GB 3.5" SAS disks <i>8x3.5" SAS (HS):</i> 4.8TB with eight 600GB 3.5" SAS disks <i>8x2.5" SAS (HS):</i> 4.8TB with eight 600GB 2.5" SAS disks	
Limited warranty	1-year parts and labor; more ThinkPlus™ information see S-TOR sheet	
Accessories	For more accessories, see O-TOR sheet	

Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0388-11U 4x6		Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4 x Hot-swap	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x Fixed
0388-12U 4x10		Core i3-2100	3.1 2C/4T	1x2GB	3.5"	8 x Hot-swap	9240-8i v2	SATA/SAS	0/1/10	DVD	IPMI	None	TPM	1x Fixed
0388-13U 4x10		Core i3-2100	3.1 2C/4T	1x2GB	2.5"	8 x Hot-swap	9240-8i v2	SAS	0/1/10	DVD	IPMI	None	TPM	1x Fixed
0388-14U 4x6		Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4 x Direct Cable	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x Fixed

- **Highly Reliable:** ECC memory and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **3-year limited warranty**¹

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)													
Implementation	One LGA1155 socket													
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 													
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz													
Disk bays	<i>Some:</i> Four 3.5" SATA disk bays, no hot-swap, direct cable <i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays <i>Some:</i> Eight 3.5" hot-swap (HS) SATA/SAS disk bays <i>Some:</i> Eight 2.5" hot-swap (HS) SAS disk bays													
Disk controller	<i>Intel PCH:</i> Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support <i>9240-8i v2:</i> ThinkServer RAID 9240-8i v2 RAID adapter, PCIe bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support													
Tape drive	Supports optional tape drive via internal USB 2.0 connector													
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive													
Diskette	None (use USB port)													
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)													
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM													
Extender card	None													
Front ports	Two USB 2.0													
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector													
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics													
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions													
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	Monitor, SATA/SAS disk, OS													
Keyboard	None (use USB port)													
Mouse	None (use USB port)													
Power supply	One fixed 400 watts standard, universal, 80 PLUS® Bronze qualified													
Mechanical	Tower, business black color, metal case													
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm													
System weight	61.7 lb (28kg) max configuration													
Tool-less	Side cover removal, disk and optical drive removal, system fan removal													
Rack mount	Rack-mountable to 5U													
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks													
Limited warranty	3-year parts and labor; more ThinkPlus™ information see S-TOR sheet													
Accessories	For more accessories, see O-TOR sheet													

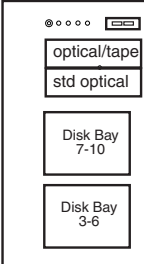
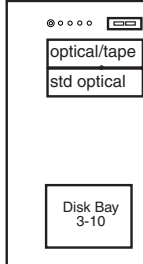
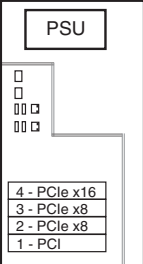


- 3.5" disk bay models:**
- | | | | | |
|-------|-------|-----------|----------|---------------------|
| Bay 1 | 5.25" | 1.6" high | external | open (optical/tape) |
| Bay 2 | 5.25" | 1.6" high | external | std optical |
| Bay 3 | 3.5" | 1" high | external | for disk |
| Bay 4 | 3.5" | 1" high | external | for disk |
| Bay 5 | 3.5" | 1" high | external | for disk |
| Bay 6 | 3.5" | 1" high | external | for disk |
- Bay 7-10 are available on Eight 3.5" disk bay models:*
- | | | | | |
|--------|------|---------|----------|----------|
| Bay 7 | 3.5" | 1" high | external | for disk |
| Bay 8 | 3.5" | 1" high | external | for disk |
| Bay 9 | 3.5" | 1" high | external | for disk |
| Bay 10 | 3.5" | 1" high | external | for disk |
- 2.5" disk bay models:**
- | | | | | |
|--------|-------|-----------|----------|---------------------|
| Bay 1 | 5.25" | 1.6" high | external | open (optical/tape) |
| Bay 2 | 5.25" | 1.6" high | external | std optical |
| Bay 3 | 2.5" | 0.6" high | external | for disk |
| Bay 4 | 2.5" | 0.6" high | external | for disk |
| Bay 5 | 2.5" | 0.6" high | external | for disk |
| Bay 6 | 2.5" | 0.6" high | external | for disk |
| Bay 7 | 2.5" | 0.6" high | external | for disk |
| Bay 8 | 2.5" | 0.6" high | external | for disk |
| Bay 9 | 2.5" | 0.6" high | external | for disk |
| Bay 10 | 2.5" | 0.6" high | external | for disk |
- Slot 1 half-length, full-height, 32-bit PCI 2.3
 Slot 2 half-length, full-height, PCI Express 2.0 x8*
 Slot 3 half-length, full-height, PCI Express 2.0 x8
 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU)
 * x4 electrical
 ** x8 electrical

- Software Management Tools**
- ThinkServer EasyStartup
 - ThinkServer EasyManage
- Security**
- Security chip (selected models, see information on left)
 - Administrator password
 - User password
 - Front panel key lock
 - Boot sequence control
 - Boot without keyboard, mouse, diskette
 - Serial port I/O control
 - USB port disablement (all)
- RoHS-compliant

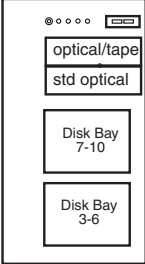
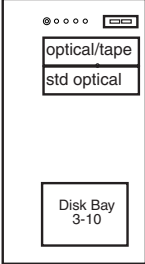
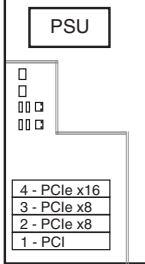
Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0388-15U 4x6	Xeon E3-1220	3.1	4C/4T	1x4GB	3.5"	4 x Hot-swap	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x Fixed
0388-16U 4x10	Xeon E3-1220	3.1	4C/4T	1x4GB	3.5"	8 x Hot-swap	9240-8i v2	SATA/SAS	0/1/10	DVD	IPMI	None	TPM	1x Fixed
0388-17U 4x10	Xeon E3-1220	3.1	4C/4T	1x4GB	2.5"	8 x Hot-swap	9240-8i v2	SAS	0/1/10	DVD	IPMI	None	TPM	1x Fixed

- **Highly Reliable:** ECC memory and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **3-year limited warranty¹**

Processor	Up to one processor, one processor standard, Intel® Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz)													
Implementation	One LGA1155 socket													
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 													
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz													
Disk bays	<i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays <i>Some:</i> Eight 3.5" hot-swap (HS) SATA/SAS disk bays <i>Some:</i> Eight 2.5" hot-swap (HS) SAS disk bays													
Disk controller	<i>Intel PCH:</i> Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support <i>9240-8i v2:</i> ThinkServer RAID 9240-8i v2 RAID adapter, PCIe bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support													
Tape drive	Supports optional tape drive via internal USB 2.0 connector													
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive													
Diskette	None (use USB port)													
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)													
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM													
Extender card	None													
Front ports	Two USB 2.0													
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector													
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics													
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions													
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	Monitor, SATA/SAS disk, OS													
Keyboard	None (use USB port)													
Mouse	None (use USB port)													
Power supply	One fixed 400 watts standard, universal, 80 PLUS® Bronze qualified													
Mechanical	Tower, business black color, metal case													
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm													
System weight	61.7 lb (28kg) max configuration													
Tool-less	Side cover removal, disk and optical drive removal, system fan removal													
Rack mount	Rack-mountable to 5U													
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks													
Limited warranty	3-year parts and labor; more ThinkPlus™ information see S-TOR sheet													
Accessories	For more accessories, see O-TOR sheet													
							Front - 3.5" disk bay 							
							Front - 2.5" disk bay 							
							Rear 							
							3.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 3.5", 1" high, external, for disk Bay 4 3.5", 1" high, external, for disk Bay 5 3.5", 1" high, external, for disk Bay 6 3.5", 1" high, external, for disk Bay 7-10 are available on Eight 3.5" disk bay models: Bay 7 3.5", 1" high, external, for disk Bay 8 3.5", 1" high, external, for disk Bay 9 3.5", 1" high, external, for disk Bay 10 3.5", 1" high, external, for disk							
							2.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 2.5", 0.6" high, external, for disk Bay 4 2.5", 0.6" high, external, for disk Bay 5 2.5", 0.6" high, external, for disk Bay 6 2.5", 0.6" high, external, for disk Bay 7 2.5", 0.6" high, external, for disk Bay 8 2.5", 0.6" high, external, for disk Bay 9 2.5", 0.6" high, external, for disk Bay 10 2.5", 0.6" high, external, for disk							
							Slot 1 half-length, full-height, 32-bit PCI 2.3 Slot 2 half-length, full-height, PCI Express 2.0 x8* Slot 3 half-length, full-height, PCI Express 2.0 x8 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU) * x4 electrical ** x8 electrical							
							Software Management Tools • ThinkServer EasyStartup • ThinkServer EasyManage							
							Security • Security chip (selected models, see information on left) • Administrator password • User password • Front panel key lock • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)							
							RoHS-compliant							

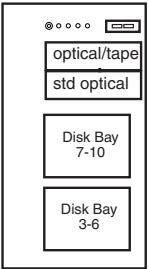
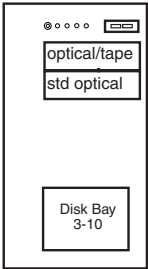
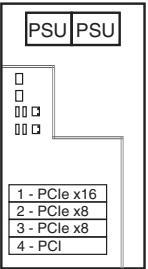
Type-model	Slot x bay	Processor(s)	GHz	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0387-11U	4x6	Core i3-2100	3.1	2C/4T	1x2GB	3.5"	4xDirect Cable	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x Fixed
0387-12U	4x6	Core i3-2100	3.1	2C/4T	1x2GB	3.5"	4xHot-swap	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x Fixed

- **Highly Reliable:** ECC memory and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **1-year limited warranty¹**

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)														
Implementation	One LGA1155 socket														
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets														
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 														
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz														
Disk bays	<i>Some:</i> Four 3.5" SATA disk bays, no hot-swap, direct cable <i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays														
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support														
Tape drive	Supports optional tape drive via internal USB 2.0 connector														
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive														
Diskette	None (use USB port)														
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)														
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM														
Extender card	None														
Front ports	Two USB 2.0														
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector														
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics														
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions														
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant														
Prerequisites	Monitor, SATA/SAS disk, OS														
Keyboard	None (use USB port)														
Mouse	None (use USB port)														
Power supply	One fixed 400 watts standard, universal, 80 PLUS [®] Bronze qualified														
Mechanical	Tower, business black color, metal case														
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm														
System weight	61.7 lb (28kg) max configuration														
Tool-less	Side cover removal, disk and optical drive removal, system fan removal														
Rack mount	Rack-mountable to 5U														
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks														
Limited warranty	1-year parts and labor; more ThinkPlus [™] information see S-TOR sheet														
Accessories	For more accessories, see O-TOR sheet														
								Front - 3.5" disk bay 							
								Front - 2.5" disk bay 							
								Rear 							
								3.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 3.5", 1" high, external, for disk Bay 4 3.5", 1" high, external, for disk Bay 5 3.5", 1" high, external, for disk Bay 6 3.5", 1" high, external, for disk <i>Bay 7-10 are available on Eight 3.5" disk bay models:</i> Bay 7 3.5", 1" high, external, for disk Bay 8 3.5", 1" high, external, for disk Bay 9 3.5", 1" high, external, for disk Bay 10 3.5", 1" high, external, for disk							
								2.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 2.5", 0.6" high, external, for disk Bay 4 2.5", 0.6" high, external, for disk Bay 5 2.5", 0.6" high, external, for disk Bay 6 2.5", 0.6" high, external, for disk Bay 7 2.5", 0.6" high, external, for disk Bay 8 2.5", 0.6" high, external, for disk Bay 9 2.5", 0.6" high, external, for disk Bay 10 2.5", 0.6" high, external, for disk							
								Slot 1 half-length, full-height, 32-bit PCI 2.3 Slot 2 half-length, full-height, PCI Express 2.0 x8* Slot 3 half-length, full-height, PCI Express 2.0 x8 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU) * x4 electrical ** x8 electrical							
								Software Management Tools • ThinkServer EasyStartup • ThinkServer EasyManage							
								Security • Security chip (selected models, see information on left) • Administrator password • User password • Front panel key lock • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)							
								RoHS-compliant							

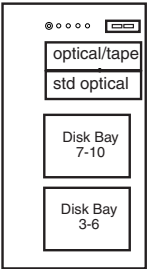
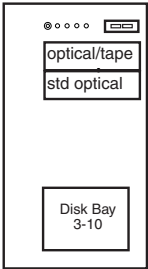
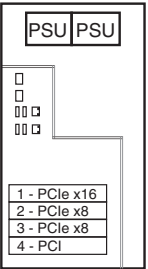
Type-model	Slot x bay	Processor(s)	GHz	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0441-11U	4x10	Xeon E3-1220	3.1	4C/4T	1x4GB	3.5"	8x Hot-swap	9240-8i v2	SATA/SAS	0/1/10	DVD±RW	IPMI	None	TPM 1x 450W	
0441-12U	4x10	Xeon E3-1240	3.3	4C/8T	1x4GB	2.5"	8x Hot-swap	9240-8i v2	SAS	0/1/10	DVD±RW	KVM	None	TPM 1x 450W	
0441-13U	4x6	Core i3-2100	3.1	2C/4T	1x2GB	3.5"	4x Hot-swap	Intel PCH	SATA	0/1/10	DVD±RW	IPMI	None	TPM 1x 450W	
0441-14U	4x6	Xeon E3-1230	3.2	4C/8T	1x4GB	3.5"	4x Hot-swap	Intel PCH	SATA	0/1/10	DVD±RW	IPMI	None	TPM 1x 450W	
0441-15U	4x10	Xeon E3-1270	3.4	4C/8T	1x4GB	2.5"	8x Hot-swap	9240-8i v2	SAS	0/1/10	DVD±RW	KVM	None	TPM 1x 450W	
0441-16U	4x10	Xeon E3-1240	3.3	4C/8T	1x4GB	3.5"	8x Hot-swap	9240-8i v2	SATA/SAS	0/1/10	DVD±RW	KVM	None	TPM 1x 450W	

- **Highly Reliable:** redundant PSU, ECC memory, and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **3-year limited warranty**¹
- **Part of the US TopSeller™ Program**

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1230 processor (4C/8T, 3.2GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.6GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1240 processor (4C/8T, 3.3GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.7GHz), DDR3 memory controller (up to 1333MHz) Intel Xeon E3-1270 processor (4C/8T, 3.4GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.8GHz), DDR3 memory controller (up to 1333MHz) One LGA1155 socket	Front - 3.5" disk bay  Front - 2.5" disk bay  Rear 
Implementation	One LGA1155 socket	
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets	
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 	
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz	
Disk bays	<i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays <i>Some:</i> Eight 3.5" hot-swap (HS) SATA/SAS disk bays <i>Some:</i> Eight 2.5" hot-swap (HS) SAS disk bays	
Disk controller	<i>Intel PCH:</i> Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID® 0, 1, 10 support <i>9240-8i v2:</i> ThinkServer RAID 9240-8i v2 RAID adapter, PCIe bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support	3.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 3.5", 1" high, external, for disk Bay 4 3.5", 1" high, external, for disk Bay 5 3.5", 1" high, external, for disk Bay 6 3.5", 1" high, external, for disk <i>Bay 7-10 are available on Eight 3.5" disk bay models:</i> Bay 7 3.5", 1" high, external, for disk Bay 8 3.5", 1" high, external, for disk Bay 9 3.5", 1" high, external, for disk Bay 10 3.5", 1" high, external, for disk 2.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 2.5", 0.6" high, external, for disk Bay 4 2.5", 0.6" high, external, for disk Bay 5 2.5", 0.6" high, external, for disk Bay 6 2.5", 0.6" high, external, for disk Bay 7 2.5", 0.6" high, external, for disk Bay 8 2.5", 0.6" high, external, for disk Bay 9 2.5", 0.6" high, external, for disk Bay 10 2.5", 0.6" high, external, for disk Slot 1 half-length, full-height, 32-bit PCI 2.3 Slot 2 half-length, full-height, PCI Express 2.0 x8* Slot 3 half-length, full-height, PCI Express 2.0 x8 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU) * x4 electrical ** x8 electrical
Tape drive	Supports optional tape drive via internal USB 2.0 connector	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
Diskette	None (use USB port)	
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)	
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM	
Extender card	None	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector	
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics	
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions	
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant	
Prerequisites	Monitor, SATA/SAS disk, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply	One or two 450 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies	
Mechanical	Tower, business black color, metal case	
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm	
System weight	61.7 lb (28kg) max configuration	
Tool-less	Side cover removal, disk and optical drive removal, system fan removal	
Rack mount	Rack-mountable to 5U	
Max internal capacity	<i>4x3.5" SATA (DC/HS):</i> 8.0TB with four 2TB 3.5" SATA disks <i>8x3.5" SATA (HS):</i> 16.0TB with eight 2TB 3.5" SATA disks <i>4x3.5" SAS (HS):</i> 2.4TB with four 600GB 3.5" SAS disks <i>8x3.5" SAS (HS):</i> 4.8TB with eight 600GB 3.5" SAS disks <i>8x2.5" SAS (HS):</i> 4.8TB with eight 600GB 2.5" SAS disks	
Limited warranty	3-year parts and labor; more ThinkPlus™ information see S-TOR sheet	
Accessories	For more accessories, see O-TOR sheet	
		Software Management Tools • ThinkServer EasyStartup • ThinkServer EasyManage
		Security • Security chip (selected models, see information on left) • Administrator password • User password • Front panel key lock • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)
		RoHS-compliant

Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0393-11U	4x6	Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4xHot-swap	Intel PCH	SATA	0/1/10	DVD±RW	IPMI	None	TPM 1x 450W	
0393-12U	4x6	Xeon E3-1220	3.1 4C/4T	1x4GB	3.5"	4xHot-swap	Intel PCH	SATA	0/1/10	DVD±RW	IPMI	None	TPM 1x 450W	

- **Highly Reliable:** redundant PSU, ECC memory, and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **1-year limited warranty¹**
- **Part of the US TopSeller™ Program**

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz) Intel Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache) , Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz) One LGA1155 socket													
Implementation	One LGA1155 socket													
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 													
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz													
Disk bays	Four 3.5" hot-swap (HS) SATA disk bays													
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support													
Tape drive	Supports optional tape drive via internal USB 2.0 connector													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
Diskette	None (use USB port)													
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)													
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM													
Extender card	None													
Front ports	Two USB 2.0													
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector													
Diagnostics	System status LEDs on front; DIT model(s): add-on Doctor Inside Technology (DIT) module for advanced diagnostics													
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); KVM model(s): add-on KVM card for KVM functions													
Security chip	No onboard TPM chip; TPM model(s): additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	Monitor, SATA/SAS disk, OS													
Keyboard	None (use USB port)													
Mouse	None (use USB port)													
Power supply	One or two 450 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies													
Mechanical	Tower, business black color, metal case													
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm													
System weight	61.7 lb (28kg) max configuration													
Tool-less	Side cover removal, disk and optical drive removal, system fan removal													
Rack mount	Rack-mountable to 5U													
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks													
Limited warranty	1-year parts and labor; more ThinkPlus™ information see S-TOR sheet													
Accessories	For more accessories, see O-TOR sheet													
								Front - 3.5" disk bay 						
								Front - 2.5" disk bay 						
								Rear 						
								3.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 3.5", 1" high, external, for disk Bay 4 3.5", 1" high, external, for disk Bay 5 3.5", 1" high, external, for disk Bay 6 3.5", 1" high, external, for disk Bay 7-10 are available on Eight 3.5" disk bay models: Bay 7 3.5", 1" high, external, for disk Bay 8 3.5", 1" high, external, for disk Bay 9 3.5", 1" high, external, for disk Bay 10 3.5", 1" high, external, for disk						
								2.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 2.5", 0.6" high, external, for disk Bay 4 2.5", 0.6" high, external, for disk Bay 5 2.5", 0.6" high, external, for disk Bay 6 2.5", 0.6" high, external, for disk Bay 7 2.5", 0.6" high, external, for disk Bay 8 2.5", 0.6" high, external, for disk Bay 9 2.5", 0.6" high, external, for disk Bay 10 2.5", 0.6" high, external, for disk						
								Slot 1 half-length, full-height, 32-bit PCI 2.3 Slot 2 half-length, full-height, PCI Express 2.0 x8* Slot 3 half-length, full-height, PCI Express 2.0 x8 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU) * x4 electrical ** x8 electrical						
								Software Management Tools • ThinkServer EasyStartup • ThinkServer EasyManage						
								Security • Security chip (selected models, see information on left) • Administrator password • User password • Front panel key lock • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)						
								RoHS-compliant						

Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0392-11U	4x6	Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4x Direct Cable	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x 450W
0392-12U	4x10	Core i3-2100	3.1 2C/4T	1x2GB	2.5"	8x Hot-swap	9240-8i v2	SAS	0/1/10	DVD	IPMI	None	TPM	1x 450W
0392-14U	4x10	Core i3-2100	3.1 2C/4T	1x2GB	3.5"	8x Hot-swap	9240-8i v2	SATA/SAS	0/1/10	DVD	IPMI	None	TPM	1x 450W
0392-15U	4x6	Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4x Hot-swap	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x 450W

- **Highly Reliable:** redundant PSU, ECC memory, and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **3-year limited warranty**¹

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache) , integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)													
Implementation	One LGA1155 socket													
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 													
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz													
Disk bays	<i>Some:</i> Four 3.5" SATA disk bays, no hot-swap, direct cable <i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays <i>Some:</i> Eight 3.5" hot-swap (HS) SATA/SAS disk bays <i>Some:</i> Eight 2.5" hot-swap (HS) SAS disk bays													
Disk controller	<i>Intel PCH:</i> Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support <i>9240-8i v2:</i> ThinkServer RAID 9240-8i v2 RAID adapter, PCIe bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support													
Tape drive	Supports optional tape drive via internal USB 2.0 connector													
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive													
Diskette	None (use USB port)													
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)													
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM													
Extender card	None													
Front ports	Two USB 2.0													
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector													
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics													
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions													
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	Monitor, SATA/SAS disk, OS													
Keyboard	None (use USB port)													
Mouse	None (use USB port)													
Power supply	One or two 450 watts standard, two maximum, rear access, hot-swap, 80 PLUS [®] Gold qualified, redundant with two power supplies													
Mechanical	Tower, business black color, metal case													
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm													
System weight	61.7 lb (28kg) max configuration													
Tool-less	Side cover removal, disk and optical drive removal, system fan removal													
Rack mount	Rack-mountable to 5U													
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks													
Limited warranty	3-year parts and labor; more ThinkPlus™ information see S-TOR sheet													
Accessories	For more accessories, see O-TOR sheet													

Front - 3.5" disk bay

Front - 2.5" disk bay

Rear

3.5" disk bay models:

Bay 1 5.25", 1.6" high, external, open (optical/tape)

Bay 2 5.25", 1.6" high, external, std optical

Bay 3 3.5", 1" high, external, for disk

Bay 4 3.5", 1" high, external, for disk

Bay 5 3.5", 1" high, external, for disk

Bay 6 3.5", 1" high, external, for disk

Bay 7-10 are available on Eight 3.5" disk bay models:

Bay 7 3.5", 1" high, external, for disk

Bay 8 3.5", 1" high, external, for disk

Bay 9 3.5", 1" high, external, for disk

Bay 10 3.5", 1" high, external, for disk

2.5" disk bay models:

Bay 1 5.25", 1.6" high, external, open (optical/tape)

Bay 2 5.25", 1.6" high, external, std optical

Bay 3 2.5", 0.6" high, external, for disk

Bay 4 2.5", 0.6" high, external, for disk

Bay 5 2.5", 0.6" high, external, for disk

Bay 6 2.5", 0.6" high, external, for disk

Bay 7 2.5", 0.6" high, external, for disk

Bay 8 2.5", 0.6" high, external, for disk

Bay 9 2.5", 0.6" high, external, for disk

Bay 10 2.5", 0.6" high, external, for disk

Slot 1 half-length, full-height, 32-bit PCI 2.3

Slot 2 half-length, full-height, PCI Express 2.0 x8*

Slot 3 half-length, full-height, PCI Express 2.0 x8

Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU)

* x4 electrical

** x8 electrical

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Front panel key lock
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

RoHS-compliant

Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0392-16U	4x6	Xeon E3-1220	3.1	4C/4T	1x4GB	3.5" 4xHot-swap	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x 450W
0392-17U	4x10	Xeon E3-1220	3.1	4C/4T	1x4GB	3.5" 8xHot-swap	9240-8i v2	SATA/SAS	0/1/10	DVD	IPMI	None	TPM	1x 450W
0392-18U	4x10	Xeon E3-1220	3.1	4C/4T	1x4GB	2.5" 8xHot-swap	9240-8i v2	SAS	0/1/10	DVD	IPMI	None	TPM	1x 450W

- **Highly Reliable:** redundant PSU, ECC memory, and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **3-year limited warranty¹**

Processor	Up to one processor, one processor standard, Intel® Xeon® E3-1220 processor (4C/4T, 3.1GHz, 8MB Cache), Turbo Boost 2.0 (up to 3.4GHz), DDR3 memory controller (up to 1333MHz)													
Implementation	One LGA1155 socket													
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 													
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz													
Disk bays	<i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays <i>Some:</i> Eight 3.5" hot-swap (HS) SATA/SAS disk bays <i>Some:</i> Eight 2.5" hot-swap (HS) SAS disk bays <i>Intel PCH:</i> Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 10 support <i>9240-8i v2:</i> ThinkServer RAID 9240-8i v2 RAID adapter, PCIe bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support													
Disk controller														
Tape drive	Supports optional tape drive via internal USB 2.0 connector													
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive													
Diskette	None (use USB port)													
Chipset	Intel C202 Chipset, Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)													
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM													
Extender card	None													
Front ports	Two USB 2.0													
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45, one port is shared with system management), one analog VGA DB-15 connector													
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics													
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions													
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	Monitor, SATA/SAS disk, OS													
Keyboard	None (use USB port)													
Mouse	None (use USB port)													
Power supply	One or two 450 watts standard, two maximum, rear access, hot-swap, 80 PLUS® Gold qualified, redundant with two power supplies													
Mechanical	Tower, business black color, metal case													
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm													
System weight	61.7 lb (28kg) max configuration													
Tool-less	Side cover removal, disk and optical drive removal, system fan removal													
Rack mount	Rack-mountable to 5U													
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks													
Limited warranty	3-year parts and labor; more ThinkPlus™ information see S-TOR sheet													
Accessories	For more accessories, see O-TOR sheet													

Front - 3.5" disk bay

Front - 2.5" disk bay

Rear

3.5" disk bay models:

Bay 1	5.25", 1.6" high, external, open (optical/tape)
Bay 2	5.25", 1.6" high, external, std optical
Bay 3	3.5", 1" high, external, for disk
Bay 4	3.5", 1" high, external, for disk
Bay 5	3.5", 1" high, external, for disk
Bay 6	3.5", 1" high, external, for disk

Bay 7-10 are available on Eight 3.5" disk bay models:

Bay 7	3.5", 1" high, external, for disk
Bay 8	3.5", 1" high, external, for disk
Bay 9	3.5", 1" high, external, for disk
Bay 10	3.5", 1" high, external, for disk

2.5" disk bay models:

Bay 1	5.25", 1.6" high, external, open (optical/tape)
Bay 2	5.25", 1.6" high, external, std optical
Bay 3	2.5", 0.6" high, external, for disk
Bay 4	2.5", 0.6" high, external, for disk
Bay 5	2.5", 0.6" high, external, for disk
Bay 6	2.5", 0.6" high, external, for disk
Bay 7	2.5", 0.6" high, external, for disk
Bay 8	2.5", 0.6" high, external, for disk
Bay 9	2.5", 0.6" high, external, for disk
Bay 10	2.5", 0.6" high, external, for disk

Slot 1 half-length, full-height, 32-bit PCI 2.3
 Slot 2 half-length, full-height, PCI Express 2.0 x8*
 Slot 3 half-length, full-height, PCI Express 2.0 x8
 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU)
 * x4 electrical
 ** x8 electrical

Software Management Tools

- ThinkServer EasyStartup
- ThinkServer EasyManage

Security

- Security chip (selected models, see information on left)
- Administrator password
- User password
- Front panel key lock
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

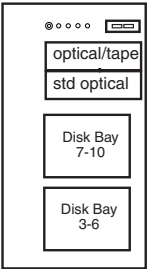
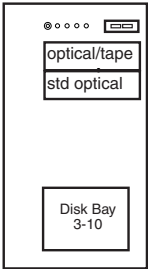
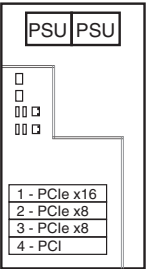
RoHS-compliant

ThinkServer™ TS430 Redundant PSU (0391)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor(s)	Cores / Threads	Memory DIMMs	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	SATA optical	System mgmt	Diagnostics (DIT)	TPM	Power Supply
0391-11U	4x6	Core i3-2100	3.1 2C/4T	1x2GB	3.5"	4xHot-swap	Intel PCH	SATA	0/1/10	DVD	IPMI	None	TPM	1x 450W

- **Highly Reliable:** redundant PSU, ECC memory, and enterprise-class SAS & SATA choices
- **Highly Manageable:** enhanced remote manageability with IPMI 2.0 BMC & optional KVM
- **Room to Grow:** highly modular hot-swap SATA/SAS design – supports up to 8 hard drives (selected models)
- **1-year limited warranty**¹

Processor	Up to one processor, one processor standard, Intel® Core™ i3-2100 processor (2C/4T, 3.1GHz, 3MB Cache), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)													
Implementation	One LGA1155 socket													
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3, ECC , four 240-pin DIMM sockets													
Additional memory disclaimers	<ul style="list-style-type: none"> • Actual memory operating speed is the lowest installed speed, dependent on processor memory controller speed and installed memory speed 													
Graphics	Onboard Aspeed AST2150 graphics/management processor, one VGA DB-15 on rear; Maximum resolution: 1600x1200@60Hz													
Disk bays	Four 3.5" hot-swap (HS) SATA disk bays													
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID ⁰ 0, 1, 10 support													
Tape drive	Supports optional tape drive via internal USB 2.0 connector													
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive													
Diskette	None (use USB port)													
Chipset	Intel C202 Chipset , Platform Controller Hub [PCH] (Slot 1-2, ethernet MAC, and USB)													
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82579LM													
Extender card	None													
Front ports	Two USB 2.0													
Rear ports	Four USB 2.0, one serial (9-pin), two ethernet (RJ-45), one port is shared with system management), one analog VGA DB-15 connector													
Diagnostics	System status LEDs on front; <i>DIT model(s):</i> add-on Doctor Inside Technology (DIT) module for advanced diagnostics													
Systems mgmt	Onboard Aspeed AST2150 graphics/management processor, IPMI 2.0-compliant baseboard management controller (BMC); <i>KVM model(s):</i> add-on KVM card for KVM functions													
Security chip	No onboard TPM chip; <i>TPM model(s):</i> additional Nuvoton WPCT210 add-on card for TPM function, TCG 1.2-compliant													
Prerequisites	Monitor, SATA/SAS disk, OS													
Keyboard	None (use USB port)													
Mouse	None (use USB port)													
Power supply	One or two 450 watts standard, two maximum, rear access, hot-swap, 80 PLUS [®] Gold qualified, redundant with two power supplies													
Mechanical	Tower, business black color, metal case													
Dimension	W x H x D = 7.68"/195mm x 16.9"/430mm x 23.4"/595mm													
System weight	61.7 lb (28kg) max configuration													
Tool-less	Side cover removal, disk and optical drive removal, system fan removal													
Rack mount	Rack-mountable to 5U													
Max internal capacity	4x3.5" SATA (DC/HS): 8.0TB with four 2TB 3.5" SATA disks 8x3.5" SATA (HS): 16.0TB with eight 2TB 3.5" SATA disks 4x3.5" SAS (HS): 2.4TB with four 600GB 3.5" SAS disks 8x3.5" SAS (HS): 4.8TB with eight 600GB 3.5" SAS disks 8x2.5" SAS (HS): 4.8TB with eight 600GB 2.5" SAS disks													
Limited warranty	1-year parts and labor; more ThinkPlus™ information see S-TOR sheet													
Accessories	For more accessories, see O-TOR sheet													
								Front - 3.5" disk bay 						
								Front - 2.5" disk bay 						
								Rear 						
								3.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 3.5", 1" high, external, for disk Bay 4 3.5", 1" high, external, for disk Bay 5 3.5", 1" high, external, for disk Bay 6 3.5", 1" high, external, for disk <i>Bay 7-10 are available on Eight 3.5" disk bay models:</i> Bay 7 3.5", 1" high, external, for disk Bay 8 3.5", 1" high, external, for disk Bay 9 3.5", 1" high, external, for disk Bay 10 3.5", 1" high, external, for disk						
								2.5" disk bay models: Bay 1 5.25", 1.6" high, external, open (optical/tape) Bay 2 5.25", 1.6" high, external, std optical Bay 3 2.5", 0.6" high, external, for disk Bay 4 2.5", 0.6" high, external, for disk Bay 5 2.5", 0.6" high, external, for disk Bay 6 2.5", 0.6" high, external, for disk Bay 7 2.5", 0.6" high, external, for disk Bay 8 2.5", 0.6" high, external, for disk Bay 9 2.5", 0.6" high, external, for disk Bay 10 2.5", 0.6" high, external, for disk Slot 1 half-length, full-height, 32-bit PCI 2.3 Slot 2 half-length, full-height, PCI Express 2.0 x8* Slot 3 half-length, full-height, PCI Express 2.0 x8 Slot 4 half-length, full-height, PCI Express 2.0 x16** (near CPU) * x4 electrical ** x8 electrical						
								Software Management Tools • ThinkServer EasyStartup • ThinkServer EasyManage						
								Security • Security chip (selected models, see information on left) • Administrator password • User password • Front panel key lock • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)						
								RoHS-compliant						

Partial list of accessories supported on Lenovo® ThinkServer TS430.

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at: bplocator.lenovo.com

Memory

2GB PC3-10600 DDR3 ECC UDIMM (1Rx8) 67Y2606 *ann 05/17/11*
 4GB PC3-10600 DDR3 ECC UDIMM (2Rx8) 67Y2607 *ann 05/17/11*

Backup

Lenovo 160GB Internal USB RDX Bundle 67Y1394 *ann 02/23/10*
 Lenovo 320GB Internal USB RDX Bundle 67Y1396 *ann 02/23/10*
 Lenovo 500GB Internal USB RDX Bundle 67Y1398 *ann 02/23/10*
 Lenovo 160GB RDX Data Cartridge 67Y1395 *ann 02/23/10*
 Lenovo 320GB RDX Data Cartridge 67Y1397 *ann 02/23/10*
 Lenovo 500GB RDX Data Cartridge 67Y1399 *ann 02/23/10*

Connectivity

Intel PRO/1000 PT Dual Port Ethernet 67Y1393 *ann 02/23/10*

Disk Drive⁶**3.5" SATA Cabled:**

250GB² 3.5" Enterprise SATA (7200 rpm) 67Y2612 *ann 05/17/11*
 500GB 3.5" Enterprise SATA (7200 rpm) 67Y2613 *ann 05/17/11*
 1TB 3.5" Enterprise SATA (7200 rpm) 67Y2614 *ann 05/17/11*
 2TB 3.5" Enterprise SATA (7200 rpm) 67Y2615 *ann 05/17/11*

3.5" SATA HS:

250GB 3.5" Enterprise SATA HS (7200 rpm) 67Y2608 *ann 06/21/11*
 500GB 3.5" Enterprise SATA HS (7200 rpm) 67Y2609 *ann 06/21/11*
 1TB 3.5" Enterprise SATA HS (7200 rpm) 67Y2610 *ann 06/21/11*
 2TB 3.5" Enterprise SATA HS (7200 rpm) 67Y2611 *ann 06/21/11*

3.5" SAS HS:**TS430 preconfigured with SAS controller:**

300GB 3.5" SAS 6Gbps HS (15000 rpm) 67Y2616 *ann 06/21/11*
 450GB 3.5" SAS 6Gbps HS (15000 rpm) 67Y2617 *ann 06/21/11*
 600GB 3.5" SAS 6Gbps HS (15000 rpm) 67Y2618 *ann 06/21/11*

2.5" SAS HS:**TS430 preconfigured with SAS controller:**

300GB 2.5" SAS 6Gbps HS (10000 rpm) 67Y2619 *ann 06/21/11*
 450GB 2.5" SAS 6Gbps HS (10000 rpm) 67Y2620 *ann 06/21/11*
 600GB 2.5" SAS 6Gbps HS (10000 rpm) 67Y2621 *ann 06/21/11*

ThinkServer RAID controller and RAID upgrade

RAID 100 Upgrade key for onboard RAID 67Y2626 *ann 06/21/11*
 RAID 500 Adapter (RAID 0/1/10) 0A89406 *ann 06/21/11*
 RAID 500 Upgrade key for Advanced RAID 0A89407 *ann 06/21/11*

System Management

Management Controller Premium 67Y2624 *ann 06/21/11*

Tower to Rack Shelf Conversion Kit

TS430 Tower to Rack Shelf Conversion Kit 67Y2641 *ann 07/12/11*

Redundant Power Supply**TS430 with Redundant PSU:**

450W hot-swap Redundant PSU 67Y2625 *ann 06/21/11*

Keyboard

Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*

Mouse

Lenovo Optical Mouse (USB) 06P4069 *ann 05/21/03*

For more information on server accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/thinkserveraccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services for ThinkServer TS430

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

Training classes

- The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

Online Training, Understanding Lenovo Servers	45K4080
Online Training, Understanding Systems Management	45K4081
Installation, ThinkServer Hardware Only	45K4082

ThinkPlus service upgrade options⁷

LOR = Lenovo Onsite Repair

TS430 with 1-year warranty

3-year LOR 9x5 Next Business Day	45K4055
4-year LOR 9x5 Next Business Day	51J0723
5-year LOR 9x5 Next Business Day	51J0725

TS430 with 3-year warranty

4-year LOR 9x5 Next Business Day	51J0727
5-year LOR 9x5 Next Business Day	51J0729

ThinkPlus Priority Support

- 24x7 support with priority routing and advanced level technicians

TS430 with 3-year warranty

3-year Priority Support	45K4060
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ThinkPlus Priority Support with Hard Disk Drive Retention

- 24x7 support with priority routing and advanced level technicians
- Hard Disk Drive Retention (HDDR) means customer keeps disk

TS430 with 3-year warranty

3-year Priority Support with HDDR	45K5443
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ThinkPlus Productivity

- Priority Support
- Online Training, Understanding Lenovo Servers
- One-time hardware installation

3-year ThinkPlus Productivity, TS430 (3-year)	45K4086
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ThinkServer™



Lenovo ThinkServer TD230



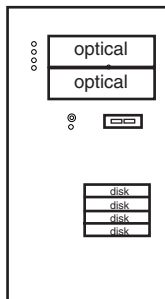
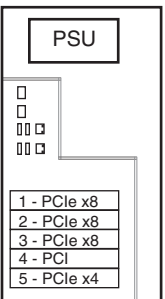
Lenovo ThinkServer TD230



Lenovo ThinkServer TD230 (Direct Cable)

Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Avail date
TD230	1029-12U	5x6	1xE5507	2.26	4	1x4GB	1333MHz	3.5" 4x	Hot-swap	ICH10R	SATA	0/1/10	IPMI	Jul 10
TD230	1029-13U	5x6	1xE5620	2.40	4	1x4GB	1333MHz	3.5" 4x	Hot-swap	9240-8i(v2)+Upgrade	SATA/SAS ⁴	0/1/5/10	KVM	Jul 10

- These models have a 3-year limited warranty¹
- Flexible and green tower computing at value price point
- These small and medium business (SMB) models are part of the US TopSeller™ Program

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5507 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 800MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5620 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache Two LGA1366 sockets	<div><div>Front</div></div> <div><div>Rear</div></div>	<ul style="list-style-type: none">• Tower mechanical• Business black color; metal case• 8.3"W x 20.1"D x 18.5"H• 210mm W x 510mm D x 470mm H• 57.6 lb (26.2kg) max configuration• Toolless side cover removal• Toolless disk and optical drive removal <div>Bay 1 5.25", 1.6" high, external, std optical</div> <div>Bay 2 5.25", 1.6" high, external, optional optical</div> <div>Bay 3 3.5", 1" high, external, optional disk</div> <div>Bay 4 3.5", 1" high, external, optional disk</div> <div>Bay 5 3.5", 1" high, external, optional disk</div> <div>Bay 6 3.5", 1" high, external, optional disk</div> <div>Slot 1: half-length, full-height, PCI Express 2.0 x8</div> <div>Slot 2: half-length, full-height, PCI Express 2.0 x8</div> <div>Slot 3: half-length, full-height, PCI Express 2.0 x8***</div> <div>Slot 4: half-length, full-height, 32-bit PCI 2.3</div> <div>Slot 5: half-length, full-height, PCI Express x4</div> <div>*** x4 electrical</div>
Memory	4GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 800MHz or 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors		
Graphics	Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; <i>Maximum resolution: 1600x1200@52Hz</i>		
Disk bays	<i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays <i>Some:</i> Four 3.5" HS SATA/SAS disk bays		
Disk controller	<i>Some:</i> Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID ⁸ 0, 1, 10 support <i>Some:</i> ThinkServer SAS 9240-8i v2, PCI Express® bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support <i>Some:</i> Additional upgrade key for 9240-8i v2, add RAID 5 support		
Optical	Super Multi-Burner DL DVD±RW, SATA 1.5Gb/s		
Diskette	None (use USB port)		
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82567		
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L; enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567		
Extender card	None		
Front ports	Two USB 2.0		
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)		
Internal ports	One USB 2.0 connector for optional tape drive		
Diagnostics	System status LEDs on front, Diagnostic LEDs on rear and board		
Systems mgmt	Onboard ServerEngines Pilot II graphics/management controller <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC) <i>KVM model(s):</i> IPMI functions PLUS KVM, ThinkServer Remote Management Module 3, supports one additional ethernet port		
Prerequisites	Monitor, SATA/SAS disk, OS		
Keyboard	None (use USB port)		
Mouse	None (use USB port)		
Power supply(s)	One fixed 625 watts standard, universal, 80 PLUS® Bronze qualified		
Cooling	Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor		
Max memory capacity 32GB with eight 4GB PC3-10600 DDR3 RDIMMs		Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: F2 at startup• Network Boot: F12 at startup• ICH10R RAID: Ctrl+E at startup• 9420-8i RAID: Ctrl+H at startup	
Max internal capacity 3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks 3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks		Software Management Tools <ul style="list-style-type: none">• ThinkServer EasyStartup	
Limited Warranty¹ 3-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays) ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378		Security <ul style="list-style-type: none">• Administrator password• User password• Front panel key lock• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)	
		RoHS-compliant	

See footnotes for important warranty information

US models announced July 27, 2010

US model withdrawn effective April 2011

Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Disk(s)	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Avail date
TD230	1029-15U	5x7	1xE5603	1.60	4	1x2GB	None	3.5"	5x Direct Cable	ICH10R	SATA	0/1/10	IPMI	Mar 11
TD230	1029-16U	5x7	1xE5606	2.13	4	1x2GB	None	3.5"	5x Direct Cable	ICH10R	SATA	0/1/10	IPMI	Mar 11
TD230	1029-17U	5x6	1xE5606	2.13	4	1x2GB	None	3.5"	4 x Hot-swap	ICH10R	SATA	0/1/10	IPMI	Mar 11
TD230	1029-18U	5x6	1xE5607	2.26	4	1x4GB	None	3.5"	4 x Hot-swap	ICH10R	SATA	0/1/10	IPMI	Mar 11
TD230	1029-1AU	5x6	1xE5645	2.40	6	1x4GB	None	3.5"	4 x Hot-swap	ICH10R	SATA	0/1/10	IPMI	Mar 11
TD230	1029-19U	5x6	1xE5620	2.40	4	1x4GB	None	3.5"	4 x Hot-swap	9240-8i(v2)+Upgrade	SATA/SAS	0/1/5/10	KVM	Mar 11
TD230	1029-1BU	5x6	1xE5645	2.40	6	1x4GB	None	3.5"	4 x Hot-swap	9240-8i(v2)+Upgrade	SATA/SAS	0/1/5/10	KVM	Mar 11

• These models have a 3-year limited warranty¹

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5606 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor E5607 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor E5620 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor E5645 with six-core , 5.86GT/s QPI, Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache			<div>Front - (Hot-swap)</div> <div>Rear</div>	
Implementation	Two LGA1366 sockets			<div><ul style="list-style-type: none">• Tower mechanical• Business black color; metal case• 8.3"W x 20.1"D x 18.5"H• 210mm W x 510mm D x 470mm H• 57.6 lb (26.2kg) max configuration• Toolless side cover removal• Toolless optical drive removal</div>	
Memory	2GB or 4GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors			<div>Hot-swap model(s):</div> <div>Bay 1 5.25", 1.6" high, external, std optical</div> <div>Bay 2 5.25", 1.6" high, external, optional optical</div> <div>Bay 3 3.5", 1" high, external, optional disk</div> <div>Bay 4 3.5", 1" high, external, optional disk</div> <div>Bay 5 3.5", 1" high, external, optional disk</div> <div>Bay 6 3.5", 1" high, external, optional disk</div>	
Graphics	Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; <i>Maximum resolution: 1600x1200@52Hz</i>			<div>Direct cable model(s):</div> <div>Bay 1 5.25", 1.6" high, external, std optical</div> <div>Bay 2 5.25", 1.6" high, external, optional optical</div> <div>Bay 3 3.5", 1" high, external, optional disk</div> <div>Bay 4 3.5", 1" high, external, optional disk</div> <div>Bay 5 3.5", 1" high, external, optional disk</div> <div>Bay 6 3.5", 1" high, external, optional disk</div> <div>Bay 7 3.5", 1" high, external, optional disk</div> <div>Slot 1: half-length, full-height, PCI Express 2.0 x8</div> <div>Slot 2: half-length, full-height, PCI Express 2.0 x8</div> <div>Slot 3: half-length, full-height, PCI Express 2.0 x8***</div> <div>Slot 4: half-length, full-height, 32-bit PCI 2.3</div> <div>Slot 5: half-length, full-height, PCI Express x4</div> <div>*** x4 electrical</div>	
Disk bays	<div>Some:</div> Five 3.5" SATA disk bays, no hot-swap, direct cable (DC)				
Disk controller	<div>Some:</div> Four 3.5" hot-swap (HS) SATA disk bays				
	<div>Some:</div> Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, RAID [®] 0, 1, 10 support				
	<div>Some:</div> ThinkServer SAS 9240-8i v2, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support				
	<div>Some:</div> Additional upgrade key for 9240-8i v2, add RAID 5 support				
	<div>DC Model(s):</div> Six SATA connectors for opticals and disks				
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
Diskette	None (use USB port)				
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82567				
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567				
Extender card	None				
Front ports	Two USB 2.0				
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)				
Internal ports	One USB 2.0 connector for optional tape drive				
Diagnostics	System status LEDs on front, Diagnostic LEDs on rear				
Systems mgmt	Onboard ServerEngines Pilot II graphics/management controller <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC) <i>KVM model(s):</i> IPMI functions PLUS KVM, ThinkServer Remote Management Module 3, supports one additional ethernet port			<div>Power-On Hotkey</div> <div><ul style="list-style-type: none">• Setup Utility: F2 at startup• Network Boot: F12 at startup• ICH10R RAID: Ctrl+E at startup</div>	
Prerequisites	Monitor, disk, OS			<div>Software Management Tools</div> <div><ul style="list-style-type: none">• ThinkServer EasyStartup</div>	
Keyboard	None (use USB port)				
Mouse	None (use USB port)				
Power supply(s)	One fixed 625 watts standard, universal, 80 PLUS [®] Bronze qualified				
Cooling	Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor			<div>Security</div> <div><ul style="list-style-type: none">• Administrator password• User password• Front panel lock out• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div>	
				RoHS-compliant	

See footnotes for important warranty information

US models announced March 15, 2011; previous models on March 1, 2011

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(NEL2-1) September 2011

Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Disk(s)	Disk size	Disk bays	Disk Controller	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
TD230	1027-13U	5x7	1xE5603	1.60	4	1x2GB	None	3.5"	5xDirect Cable	ICH10R	SATA	DVD	0/1/10	IPMI	2xGb	Mar 11

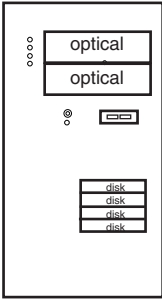
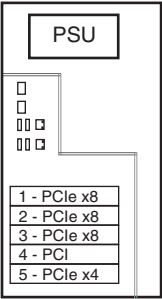
- **This model has a 1-year limited warranty¹**
- **Flexible and green tower computing at value price point**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache	<div> <div>Front</div> </div> <div> <div>Rear</div> </div>
Implementation	Two LGA1366 sockets	
Memory	2GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	
Graphics	Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; <i>Maximum resolution: 1600x1200@52Hz</i>	
Disk bays	Five 3.5" SATA disk bays, no hot-swap, direct cable (DC)	
Disk controller	Six SATA connectors for opticals and disks, Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID ⁵ 0, 1, 10 support	<ul style="list-style-type: none"> • Tower mechanical • Business black color; metal case • 8.3"W x 20.1"D x 18.5"H • 210mm W x 510mm D x 470mm H • 57.6 lb (26.2kg) max configuration • Toolless side cover removal • Toolless disk and optical drive removal
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive	
Diskette	None (use USB port)	
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82567	
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567	Bay 1 5.25", 1.6" high, external, std optical Bay 2 5.25", 1.6" high, external, optional optical Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Slot 1: half-length, full-height, PCI Express 2.0 x8 Slot 2: half-length, full-height, PCI Express 2.0 x8 Slot 3: half-length, full-height, PCI Express 2.0 x8*** Slot 4: half-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCI Express x4 *** x4 electrical
Extender card	None	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)	
Internal ports	One USB 2.0 connector for optional tape drive	
Diagnostics	System status LEDs on front, Diagnostic LEDs on rear	
Systems mgmt	Onboard ServerEngines Pilot II graphics/management controller, IPMI 2.0-compliant baseboard management controller (BMC)	
Prerequisites	Monitor, SATA/SAS disk, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply(s)	One fixed 625 watts standard, universal, 80 PLUS® Bronze qualified	
Cooling	Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor	
Accessories 2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1432 ThinkServer TD230 SATA RAID 5 Upgrade 67Y1459 250GB 3.5" SATA (7200 rpm) 67Y1400 More accessories on O-ARTsheet Other accessories at lenovo.com/accessories		
Max memory capacity 32GB with eight 4GB PC3-10600 DDR3 RDIMMs		Power-On Hotkey <ul style="list-style-type: none"> • Setup Utility: F2 at startup • Network Boot: F12 at startup • ICH10R RAID: Ctrl+E at startup
Max internal capacity 10.0TB with five 2TB 3.5" SATA disks		Software Management Tools <ul style="list-style-type: none"> • ThinkServer EasyStartup
Limited Warranty¹ ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none"> • Onsite service upgrade options (in eligible locations)⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378		Security <ul style="list-style-type: none"> • Administrator password • User password • Front panel lock out • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all)
		RoHS-compliant

See footnotes for important warranty information
US model announced March 1, 2011

Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Disk(s)	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Ethernet	Avail date
TD230	1040-14U	5x7	1xE5603	1.60	4	1x2GB	None	3.5"	5xDirect Cable	ICH10R	SATA	0/1/10	IPMI	2xGb	Mar 11
TD230	1040-15U	5x6	1xE5603	1.60	4	1x2GB	None	3.5"	4 x Hot-swap	ICH10R	SATA	0/1/10	IPMI	2xGb	Mar 11
TD230	1040-16U	5x6	1xE5603	1.60	4	1x2GB	None	3.5"	4 x Hot-swap	9240-8i(v2)	SATA/SAS	0/1/10	IPMI	2xGb	Mar 11

- **These models have a 3-year limited warranty¹**
- **Flexible and green tower computing at value price point**

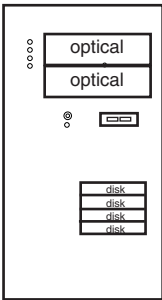
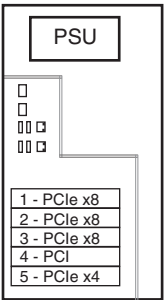
Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache			Front - (Hot-swap)			Rear																																																						
Implementation	Two LGA1366 sockets																																																												
Memory	2GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors			<ul style="list-style-type: none">• Tower mechanical• Business black color; metal case• 8.3"W x 20.1"D x 18.5"H• 210mm W x 510mm D x 470mm H• 57.6 lb (26.2kg) max configuration• Toolless side cover removal• Toolless optical drive removal <p>Hot-swap model(s):</p> <table><tr><td>Bay 1</td><td>5.25", 1.6" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>5.25", 1.6" high,</td><td>external,</td><td>optional optical</td></tr><tr><td>Bay 3</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 4</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 6</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr></table> <p>Direct cable model(s):</p> <table><tr><td>Bay 1</td><td>5.25", 1.6" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>5.25", 1.6" high,</td><td>external,</td><td>optional optical</td></tr><tr><td>Bay 3</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 4</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 6</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 7</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr></table> <p>Slot 1: half-length, full-height, PCI Express 2.0 x8 Slot 2: half-length, full-height, PCI Express 2.0 x8 Slot 3: half-length, full-height, PCI Express 2.0 x8*** Slot 4: half-length, full-height, 32-bit PCI 2.3 Slot 5: half-length, full-height, PCI Express x4 *** x4 electrical</p>						Bay 1	5.25", 1.6" high,	external,	std optical	Bay 2	5.25", 1.6" high,	external,	optional optical	Bay 3	3.5", 1" high,	external,	optional disk	Bay 4	3.5", 1" high,	external,	optional disk	Bay 5	3.5", 1" high,	external,	optional disk	Bay 6	3.5", 1" high,	external,	optional disk	Bay 1	5.25", 1.6" high,	external,	std optical	Bay 2	5.25", 1.6" high,	external,	optional optical	Bay 3	3.5", 1" high,	external,	optional disk	Bay 4	3.5", 1" high,	external,	optional disk	Bay 5	3.5", 1" high,	external,	optional disk	Bay 6	3.5", 1" high,	external,	optional disk	Bay 7	3.5", 1" high,	external,	optional disk
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Graphics	Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; <i>Maximum resolution: 1600x1200@52Hz</i>																																																												
Disk bays	<i>Some:</i> Five 3.5" SATA disk bays, no hot-swap, direct cable (DC) <i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays																																																												
Disk controller	<i>Some:</i> Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, RAID [®] 0, 1, 10 support <i>Some:</i> ThinkServer SAS 9240-8i v2, PCI Express [®] bus, SATA 6.0Gb/s, SAS 6.0Gb/s, RAID 0, 1, 10 support <i>DC Model(s):</i> Six SATA connectors for opticals and disks																																																												
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive																																																												
Diskette	None (use USB port)																																																												
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82567																																																												
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567																																																												
Extender card	None																																																												
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Diagnostics	System status LEDs on front, Diagnostic LEDs on rear																																																												
Systems mgmt	Onboard ServerEngines Pilot II graphics/management controller, IPMI 2.0-compliant baseboard management controller (BMC)																																																												
Prerequisites	Monitor, disk, OS																																																												
Keyboard	None (use USB port)																																																												
Mouse	None (use USB port)																																																												
Power supply(s)	One fixed 625 watts standard, universal, 80 PLUS [®] Bronze qualified																																																												
Cooling	Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor																																																												
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• Serial port I/O control																																																													
• USB port disablement (all)																																																													
RoHS-compliant																																																													

See footnotes for important warranty information

US model announced March 15, 2011; previous models on March 1, 2011

Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Disk(s)	Disk size	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Ethernet	Avail date
TD230	1039-13U	5x7	1x E5603	1.60	4	1x 2GB	None	3.5"	5x Direct Cable	ICH10R	SATA	0/1/10	IPMI	2x Gb	Mar 11
TD230	1039-14U	5x6	1x E5603	1.60	4	1x 2GB	None	3.5"	4x Hot-swap	ICH10R	SATA	0/1/10	IPMI	2x Gb	Mar 11

- **These models have a 1-year limited warranty¹**
- **Flexible and green tower computing at value price point**

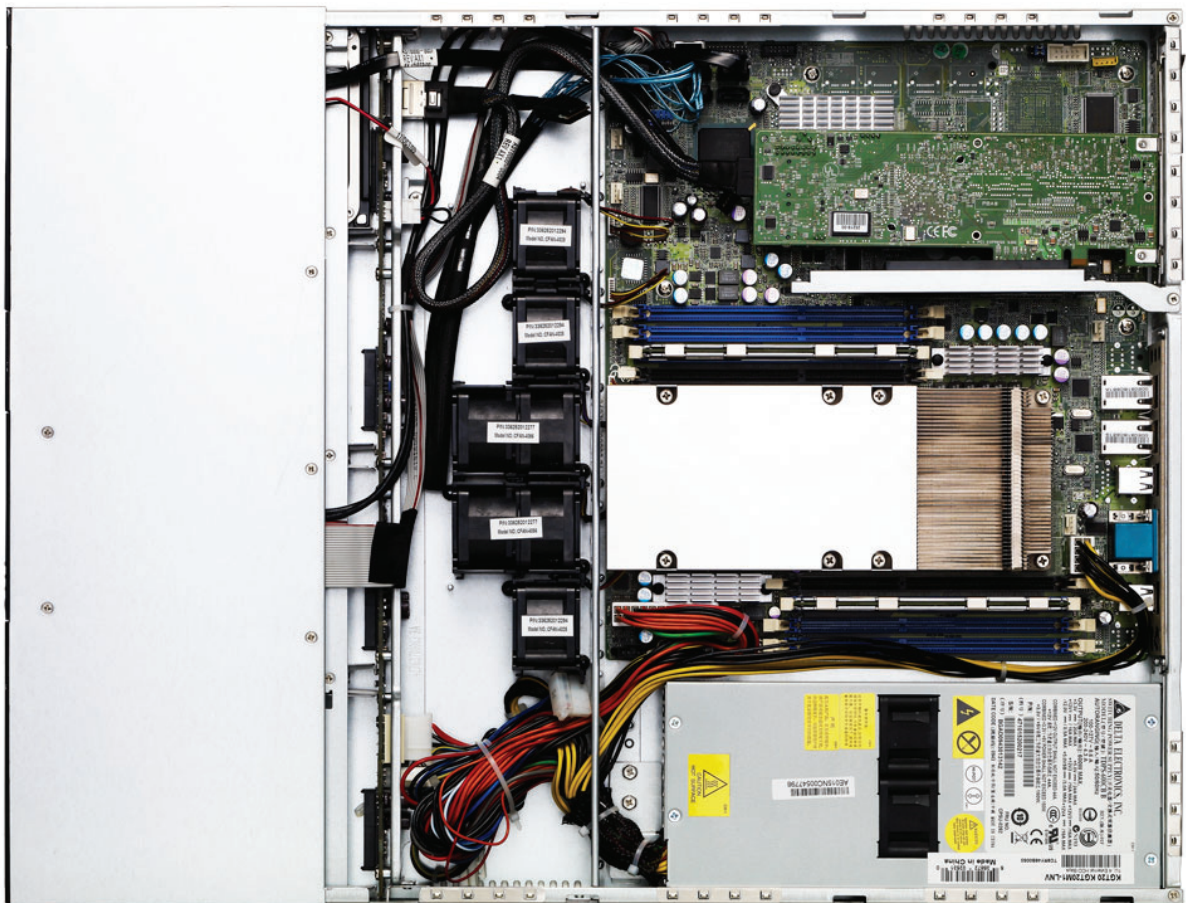
Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache			Front - (Hot-swap)		Rear	
Implementation	Two LGA1366 sockets						
Memory	2GB std, 32GB max (16GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors						
Graphics	Onboard ServerEngines™ Pilot II graphics/management controller, one VGA DB-15 on rear, 32MB; <i>Maximum resolution: 1600x1200@52Hz</i>						
Disk bays	<i>Some:</i> Five 3.5" SATA disk bays, no hot-swap, direct cable (DC) <i>Some:</i> Four 3.5" hot-swap (HS) SATA disk bays						
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10R, RAID ⁰ 0, 1, 10 support <i>DC Model(s):</i> Six SATA connectors for opticals and disks						
Optical	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴ Drive						
Diskette	None (use USB port)						
Ethernet	Two Gigabit Ethernet ports, Intel 82574L and 82567						
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right) and links to 82574L, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, slots 4-5, onboard SATA controller, and links to 82567						
Extender card	None						
Front ports	Two USB 2.0						
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)						
Internal ports	One USB 2.0 connector for optional tape drive						
Diagnostics	System status LEDs on front, Diagnostic LEDs on rear						
Systems mgmt	Onboard ServerEngines Pilot II graphics/management controller, IPMI 2.0-compliant baseboard management controller (BMC)						
Prerequisites	Monitor, disk, OS						
Keyboard	None (use USB port)						
Mouse	None (use USB port)						
Power supply(s)	One fixed 625 watts standard, universal, 80 PLUS® Bronze qualified						
Cooling	Five fans std (power supply, two front, one rear, first processor), one optional processor fan for second processor						
Accessories							
2GB PC3-10600 DDR3 1333 MHz RDIMM				67Y1432			
ThinkServer TD230 SATA RAID 5 Upgrade				67Y1459			
250GB 3.5" SATA (7200 rpm)				67Y1400			
More accessories on O-ARTsheet							
Other accessories at lenovo.com/accessories							
Max memory capacity							
32GB with eight 4GB PC3-10600 DDR3 RDIMMs							
Max internal capacity							
3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks							
3.5" SATA DC: 10.0TB with five 2TB 3.5" SATA disks							
Limited Warranty¹							
⇒ 1-year parts and labor							
⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays)							
⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty							
• Onsite service upgrade options (in eligible locations) ⁷							
• Post warranty maintenance services							
⇒ 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378							



Lenovo ThinkServer RD230



Lenovo ThinkServer RD230



Lenovo ThinkServer RD230

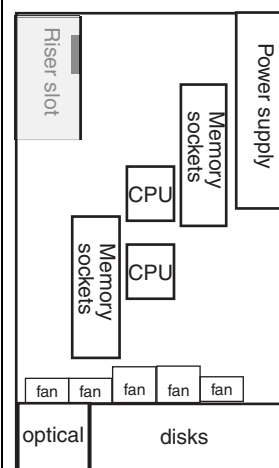
Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	RAID Battery	Disk bays	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	4011-16U	1x5	1xE5603	1.60	4	1x4GB	1333MHz	3.5"		4x Hot-swap	SATA	DVD±RW	0/1/5/10	IPMI	2xGb	Mar 11
RD230	4011-17U	1x5	1xE5606	2.13	4	1x4GB	1333MHz	3.5"		4x Hot-swap	SATA	DVD±RW	0/1/5/10	IPMI	2xGb	Mar 11
RD230	4011-18U	1x5	1xE5607	2.26	4	1x4GB	1333MHz	3.5"		4x Hot-swap	SATA	DVD±RW	0/1/5/10	KVM	2xGb	Mar 11
RD230	4011-19U	1x5	1xE5620	2.40	4	1x4GB	1333MHz	3.5"		4x Hot-swap	SATA	DVD±RW	0/1/5/10	KVM	2xGb	Mar 11
RD230	4011-1AU	1x5	1xE5645	2.40	6	1x4GB	1333MHz	3.5"		4x Hot-swap	SATA	DVD±RW	0/1/5/10	IPMI	2xGb	Mar 11
RD230	4011-1BU	1x5	1xE5645	2.40	6	1x8GB	1333MHz	3.5"	Battery	4x Hot-swap	SATA/SAS ⁴	DVD±RW	0/1/5/6/10	KVM	2xGb	Mar 11
RD230	4011-1CU	1x5	2xX5650	2.66	12	2x8GB	1333MHz	3.5"	Battery	4x Hot-swap	SATA/SAS	DVD±RW	0/1/5/6/10	KVM	2xGb	Mar 11
RD230	4011-1DU	1x5	1xE5645	2.40	6	1x4GB	1333MHz	3.5"		4x Hot-swap	SATA	DVD±RW	0/1/5/10	KVM	2xGb	Mar 11

• These models have a 3-year limited warranty¹

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Processor(s)	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5603 with quad-core, 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5606 with quad-core, 4.8GT/s QPI, Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor E5607 with quad-core, 4.8GT/s QPI, Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor E5620 with quad-core, 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor E5645 with six-core, 5.86GT/s QPI, Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core, 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	Two LGA1366 sockets
Memory	4GB, 8GB, or 16GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring, eight 240-pin DIMM sockets** * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; Maximum resolution: 1600x1200@60Hz	
Disk bays	16U/17U/18U/19U/1AU/1DU: Four 3.5" hot-swap (HS) SATA disk bays 1BU/1CU: Four 3.5" hot-swap (HS) SATA/SAS disk bays	
Disk controller	16U/17U/18U/19U/1AU/1DU: Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 5, 10 support ThinkServer 8708EM2 SAS RAID Controller, PCI Express [®] bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10 support, Battery backed cache integrated 1BU/1CU:	
Optical	UltraSlim Enhanced DVD±RW	
Diskette	None (use USB port)	
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers	
Chipset	Intel 5500 Chipset, Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller	
Riser card	(See Right) One PCI Express 2.0 x16 slot standard	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)	
Internal port	One USB 2.0 connector	
Diagnostics	Diagnostic and system status LEDs on front panel	
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor IPMI model(s): IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub KVM model(s): IPMI functions PLUS KVM supported, 24bit high quality video compression	
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply(s)	One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy	
Cooling	Five fans standard, five maximum, variable speed	

1U Rack top



Front



Rear



- 1U Mechanical; rack-mount only
- Black color front; metal case
- 17.2"W x 22.4"D x 1.72"H
- 436mm W x 568mm D x 43.6mm H
- 37.7 lb (17kg) max configuration
- Toolless top cover removal
- Toolless disk and optical drive removal
- Toolless adapter retention

Bay 1	5.25", 0.5" high, external, std optical
Bay 2	3.5", 1" high, external, optional disk
Bay 3	3.5", 1" high, external, optional disk
Bay 4	3.5", 1" high, external, optional disk
Bay 5	3.5", 1" high, external, optional disk

Slot 1: half-length, full-height, PCI Express 2.0 x16

Virtualization

Virtualization ready, VMWare Ready™ certified

Power-On Hotkey

- Setup Utility: DEL at startup
- Network Boot: F12 at startup
- Onboard SATA RAID: Ctrl+I at startup
- Add-on SATA/SAS RAID: Ctrl+H at startup

Software Management Tools

- ThinkServer EasyStartup

Security

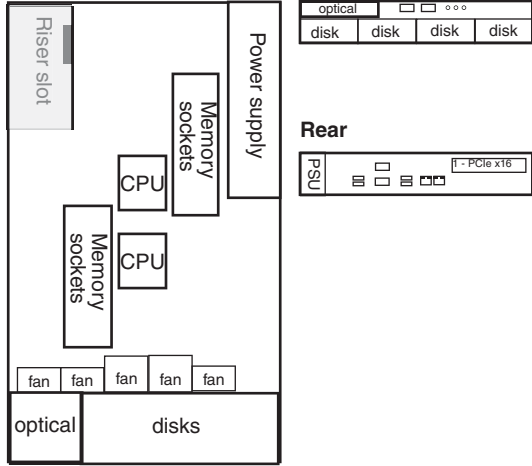
- Administrator password
- User password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- Serial port I/O control
- USB port disablement (all)

RoHS-compliant

Name	Type-model	Slot x bay	Processor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	RAID Battery	Disk bays	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	1044-16U	1x5	1xE5603	1.60	4	1x2GB	1333MHz	3.5"	None	4xHot-swap	SATA	DVD±RW	0/1/5/10	IPMI	2xGb	Mar 11
➤ RD230	1044-17U	1x5	1xE5606	2.13	4	1x4GB	1333MHz	3.5"	None	4xHot-swap	SATA/SAS*	DVD±RW	0/1/5/6/10	KVM	2xGb	Mar 11

• **These models have a 3-year limited warranty¹**

• **High performance, advanced RAID, and remote management supported at value price point**

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5606 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache			<div>1U Rack top</div>  <div>Front</div> <div>Rear</div>		
Implementation	Two LGA1366 sockets					
Memory	2GB or 4GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors					
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>					
Disk bays	16U: Four 3.5" hot-swap (HS) SATA disk bays 17U: Four 3.5" hot-swap (HS) SATA/SAS disk bays					
Disk controller	16U: Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID ⁰ 0, 1, 5, 10 support 17U: ThinkServer 8708ELP SAS RAID Controller, PCI Express [®] bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10 support					
Optical	UltraSlim Enhanced DVD±RW			<div>• 1U Mechanical; rack-mount only</div> <div>• Black color front; metal case</div> <div>• 17.2"W x 22.4"D x 1.72"H</div> <div>• 436mm W x 568mm D x 43.6mm H</div> <div>• 37.7 lb (17kg) max configuration</div> <div>• Toolless top cover removal</div> <div>• Toolless disk and optical drive removal</div> <div>• Toolless adapter retention</div> <div>Bay 1 5.25", 0.5" high, external, std optical</div> <div>Bay 2 3.5", 1" high, external, optional disk</div> <div>Bay 3 3.5", 1" high, external, optional disk</div> <div>Bay 4 3.5", 1" high, external, optional disk</div> <div>Bay 5 3.5", 1" high, external, optional disk</div> <div>Slot 1: half-length, full-height, PCI Express 2.0 x16</div>		
Diskette	None (use USB port)					
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers					
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller					
Riser card	(See Right) One PCI Express 2.0 x16 slot standard					
Front ports	Two USB 2.0					
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)					
Internal port	One USB 2.0 connector					
Diagnostics	Diagnostic and system status LEDs on front panel					
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression					
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS					
Keyboard	None (use USB port)					
Mouse	None (use USB port)					
Power supply(s)	One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy					
Cooling	Five fans standard, five maximum, variable speed					
<div><div>Accessories</div><div>2GB PC3-10600 DDR3 1333 MHz RDIMM More accessories on O-ARTsheet</div><div>Other accessories at lenovo.com/accessories</div></div>				<div>Virtualization</div> <div>Virtualization ready, VMWare Ready™ certified</div>		
<div><div>Max memory capacity</div><div>64GB with eight 8GB RDIMMs</div></div>				<div>Power-On Hotkey</div> <div>• Setup Utility: DEL at startup</div> <div>• Network Boot: F12 at startup</div> <div>• Onboard SATA RAID: Ctrl+I at startup</div> <div>• Add-on SATA/SAS RAID: Ctrl+H at startup</div>		
<div><div>Max internal capacity</div><div>3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks</div><div>3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks</div></div>				<div>Software Management Tools</div> <div>• ThinkServer EasyStartup</div>		
<div><div>Limited Warranty¹</div><div>➤ 3-year parts and labor</div><div>➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>➤ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div><div>• Onsite service upgrade options (in eligible locations)⁷</div><div>• Post warranty maintenance services</div><div>➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div>				<div>Security</div> <div>• Administrator password</div> <div>• User password</div> <div>• Boot sequence control</div> <div>• Boot without keyboard, mouse, diskette</div> <div>• Serial port I/O control</div> <div>• USB port disablement (all)</div>		
				RoHS-compliant		

See footnotes for important warranty information

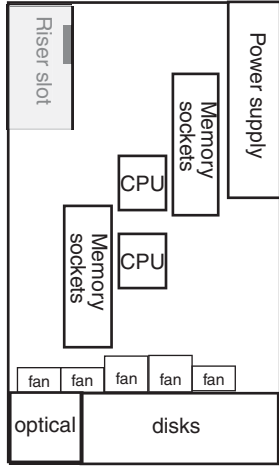


US models announced March 1, 2011

➤ **US model withdrawn effective August 2011**

Name	Type-model	Slot x bay	Processor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	RAID Battery	Disk bays	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	1044-18U	1 x 5	1 x E5603	1.60	4	1 x 2GB	1333MHz	3.5"	None	4 x Hot-swap	SATA/SAS ⁴	DVD±RW	0/1/1E	IPMI	2 x Gb	May 11
RD230	1044-19U	1 x 5	1 x E5603	1.60	4	1 x 2GB	1333MHz	3.5"	None	4 x Hot-swap	SATA/SAS	DVD±RW	0/1/1E	KVM	2 x Gb	May 11

• **These models have a 3-year limited warranty¹**

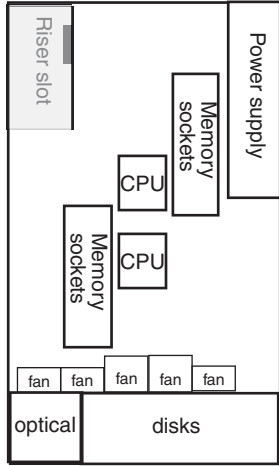
• **High performance, advanced RAID, and remote management supported at value price point**

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache	<div>1U Rack top</div> <div></div> <div><div>Front</div><div></div><div><div>Rear</div><div></div></div></div>
Implementation	Two LGA1366 sockets	
Memory	2GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>	
Disk bays	Four 3.5" hot-swap (HS) SATA/SAS disk bays	
Disk controller	LSI™ LSISAS1068E, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID ⁰ , 1, 1E support	
Optical	UltraSlim Enhanced DVD±RW	
Diskette	None (use USB port)	
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers	
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller	
Riser card	(See Right) One PCI Express 2.0 x16 slot standard	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)	
Internal port	One USB 2.0 connector	
Diagnostics	Diagnostic and system status LEDs on front panel	
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression	
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply(s)	One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy	
Cooling	Five fans standard, five maximum, variable speed	
<div><div>Accessories</div><div>2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1432</div><div>More accessories on O-ARTsheet</div><div>Other accessories at lenovo.com/accessories</div></div>		<div><div>Virtualization</div><div>Virtualization ready, VMWare Ready™ certified</div></div>
<div><div>Max memory capacity</div><div>64GB with eight 8GB RDIMMs</div></div>		<div><div>Power-On Hotkey</div><div><ul style="list-style-type: none">• Setup Utility: DEL at startup• Network Boot: F12 at startup• 1068E RAID: Ctrl+E at startup• Add-on SATA/SAS RAID: Ctrl+H at startup</div></div>
<div><div>Max internal capacity</div><div>3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks</div><div>3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks</div></div>		<div><div>Software Management Tools</div><div><ul style="list-style-type: none">• ThinkServer EasyStartup</div></div>
<div><div>Limited Warranty¹</div><div><ul style="list-style-type: none">⇒ 3-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty<ul style="list-style-type: none">• Onsite service upgrade options (in eligible locations)⁷• Post warranty maintenance services⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div>		<div><div>Security</div><div><ul style="list-style-type: none">• Administrator password• User password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div></div>
		RoHS-compliant

See footnotes for important warranty information
US models announced May 31, 2011

Name	Type-model	Slot x bay	Processor(s)	GHz Cores	Memory DIMMs	Memory speed	Disk size	RAID Battery	Disk bays	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	1044-20U	1x5 1x5	E5606	2.13 4	1x4GB	1333MHz	3.5"	None	4xHot-swap	SATA/SAS ⁴	DVD±RW	0/1/5/6/10	KVM	2xGb	Jul 11

- **3-year limited warranty¹**
- **High performance, advanced RAID, and remote management supported at value price point**

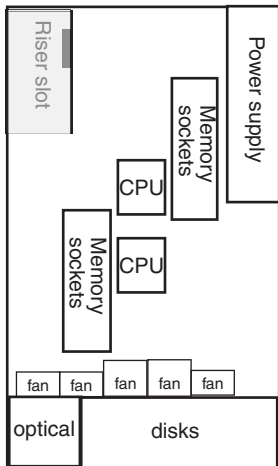

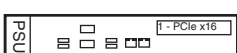
Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5606 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache	<div>1U Rack top</div> <div></div> <div><div>Front<div><div>optical</div><div>diskdiskdiskdisk</div></div><div>Rear<div><div>PSU</div><div>PCIe x16</div></div></div></div><div><ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.2"W x 22.4"D x 1.72"H• 436mm W x 568mm D x 43.6mm H• 37.7 lb (17kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention<div>Bay 15.25", 0.5" high, external, std optical</div><div>Bay 23.5", 1" high, external, optional disk</div><div>Bay 33.5", 1" high, external, optional disk</div><div>Bay 43.5", 1" high, external, optional disk</div><div>Bay 53.5", 1" high, external, optional disk</div><div>Slot 1: half-length, full-height, PCI Express 2.0 x16</div></div></div>
Implementation	Two LGA1366 sockets	
Memory	4GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>	
Disk bays	Four 3.5" hot-swap (HS) SATA/SAS disk bays	
Disk controller	ThinkServer 8708EM2 SAS RAID Controller, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10 support	
Optical	UltraSlim Enhanced DVD±RW	
Diskette	None (use USB port)	
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers	
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller	
Riser card	(See Right) One PCI Express 2.0 x16 slot standard	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)	
Internal port	One USB 2.0 connector	
Diagnostics	Diagnostic and system status LEDs on front panel	
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression	
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply(s)	One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy	
Cooling	Five fans standard, five maximum, variable speed	

<div>Accessories</div> <div>2GB PC3-10600 DDR3 1333 MHz RDIMM67Y1432</div> <div>More accessories on O-ARTsheet</div> <div>Other accessories at lenovo.com/accessories</div> <div>Max memory capacity</div> <div>64GB with eight 8GB RDIMMs</div> <div>Max internal capacity</div> <div>3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks</div> <div>3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks</div> <div>Limited Warranty¹</div> <div>⇒ 3-year parts and labor</div> <div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div> <div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div> <div>• Onsite service upgrade options (in eligible locations)⁷</div> <div>• Post warranty maintenance services</div> <div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div>	<div>Virtualization</div> <div>Virtualization ready, VMWare Ready™ certified</div> <div>Power-On Hotkey</div> <div>• Setup Utility: DEL at startup</div> <div>• Network Boot: F12 at startup</div> <div>• 1068E RAID: Ctrl+E at startup</div> <div>• Add-on SATA/SAS RAID: Ctrl+H at startup</div> <div>Software Management Tools</div> <div>• ThinkServer EasyStartup</div> <div>Security</div> <div>• Administrator password</div> <div>• User password</div> <div>• Boot sequence control</div> <div>• Boot without keyboard, mouse, diskette</div> <div>• Serial port I/O control</div> <div>• USB port disablement (all)</div> <div>RoHS-compliant</div>
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See footnotes for important warranty information
US model(s) announced July 12, 2011

Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	RAID Battery	Disk bays	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	1043-12U	1x5	1x E5603	1.60	4	1x 2GB	1333MHz	3.5"	None	4x Hot-swap	SATA	DVD±RW	0/1/5/10	IPMI	2xGb	Mar 11

- **This model has a 1-year limited warranty¹**
- **High performance, advanced RAID, and remote management supported at value price point**

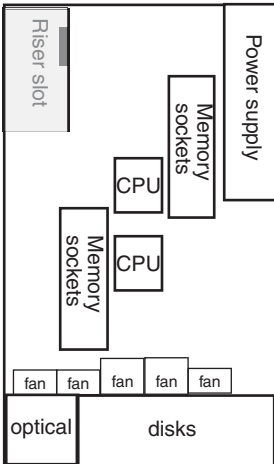


Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache	<div>1U Rack top</div> <div></div> <div><div>Front</div><div></div><div><div>Rear</div><div></div></div></div>																				
Implementation	Two LGA1366 sockets																					
Memory	2GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors																					
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>																					
Disk bays	Four 3.5" hot-swap (HS) SATA disk bays																					
Disk controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID [®] 0, 1, 5, 10 support																					
Optical	UltraSlim Enhanced DVD±RW																					
Diskette	None (use USB port)																					
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers																					
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller																					
Riser card	(See Right) One PCI Express 2.0 x16 slot standard	<ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.2"W x 22.4"D x 1.72"H• 436mm W x 568mm D x 43.6mm H• 37.7 lb (17kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention <table><tr><td>Bay 1</td><td>5.25", 0.5" high,</td><td>external,</td><td>std optical</td></tr><tr><td>Bay 2</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 3</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 4</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr><tr><td>Bay 5</td><td>3.5", 1" high,</td><td>external,</td><td>optional disk</td></tr></table> <p>Slot 1: half-length, full-height, PCI Express 2.0 x16</p>	Bay 1	5.25", 0.5" high,	external,	std optical	Bay 2	3.5", 1" high,	external,	optional disk	Bay 3	3.5", 1" high,	external,	optional disk	Bay 4	3.5", 1" high,	external,	optional disk	Bay 5	3.5", 1" high,	external,	optional disk
Bay 1	5.25", 0.5" high,		external,	std optical																		
Bay 2	3.5", 1" high,		external,	optional disk																		
Bay 3	3.5", 1" high,		external,	optional disk																		
Bay 4	3.5", 1" high,		external,	optional disk																		
Bay 5	3.5", 1" high,		external,	optional disk																		
Front ports	Two USB 2.0																					
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)																					
Internal port	One USB 2.0 connector																					
Diagnostics	Diagnostic and system status LEDs on front panel																					
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub																					
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS																					
Keyboard	None (use USB port)																					
Mouse	None (use USB port)																					
Power supply(s)	One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy																					
Cooling	Five fans standard, five maximum, variable speed																					
<div><div>Accessories</div><table><tr><td>2GB PC3-10600 DDR3 1333 MHz RDIMM</td><td>67Y1432</td></tr><tr><td>8GB PC3-10600 DDR3 1333 MHz RDIMM</td><td>67Y1464</td></tr><tr><td>500GB² 3.5" SATA HS (7200 rpm)</td><td>67Y1401</td></tr><tr><td>1TB 3.5" SATA HS (7200 rpm)</td><td>67Y1402</td></tr></table><p>More accessories on O-ARTsheet</p><p>Other accessories at lenovo.com/accessories</p></div>			2GB PC3-10600 DDR3 1333 MHz RDIMM	67Y1432	8GB PC3-10600 DDR3 1333 MHz RDIMM	67Y1464	500GB ² 3.5" SATA HS (7200 rpm)	67Y1401	1TB 3.5" SATA HS (7200 rpm)	67Y1402												
2GB PC3-10600 DDR3 1333 MHz RDIMM	67Y1432																					
8GB PC3-10600 DDR3 1333 MHz RDIMM	67Y1464																					
500GB ² 3.5" SATA HS (7200 rpm)	67Y1401																					
1TB 3.5" SATA HS (7200 rpm)	67Y1402																					
<div><div>Max memory capacity</div><p>64GB with eight 8GB RDIMMs</p></div>																						
<div><div>Max internal capacity</div><p>8.0TB with four 2TB 3.5" SATA disks</p></div>																						
<div><div>Limited Warranty¹</div><div><div><div>1-year parts and labor</div><div>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div><div><div>Onsite service upgrade options (in eligible locations)⁷</div><div>Post warranty maintenance services</div></div><div>24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div></div></div>																						
<div><div>Virtualization</div><p>Virtualization ready, VMWare Ready™ certified</p></div>																						
<div><div>Power-On Hotkey</div><ul style="list-style-type: none">• Setup Utility: DEL at startup• Network Boot: F12 at startup• Onboard SATA RAID: Ctrl+I at startup</div>																						
<div><div>Software Management Tools</div><ul style="list-style-type: none">• ThinkServer EasyStartup</div>																						
<div><div>Security</div><ul style="list-style-type: none">• Administrator password• User password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div>																						
<div><div>RoHS-compliant</div></div>																						

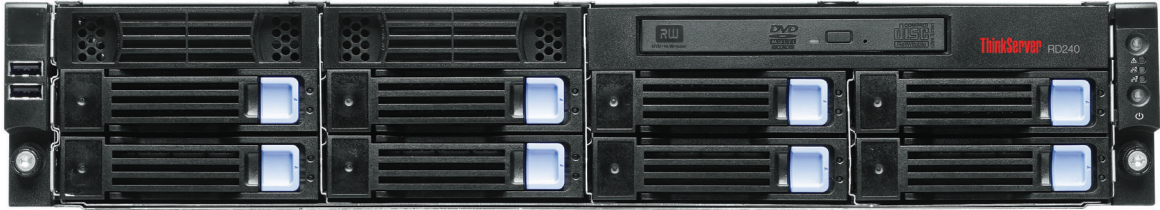
See footnotes for important warranty information
US model announced March 1, 2011

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Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Disk size	RAID Battery	Disk bays	Disk type	SATA optical	RAID Int	System mgmt	Ethernet	Avail date
RD230	1043-13U	1x5	1xE5603	1.60	4	1x2GB	1333MHz	3.5"	None	4xHot-swap	SATA/SAS ⁴	DVD±RW	0/1/1E	IPMI	2xGb	May 11
RD230	1043-14U	1x5	1xE5603	1.60	4	1x2GB	1333MHz	3.5"	None	4xHot-swap	SATA/SAS	DVD±RW	0/1/1E	KVM	2xGb	May 11

- **These models have a 1-year limited warranty¹**
- **High performance, advanced RAID, and remote management supported at value price point**

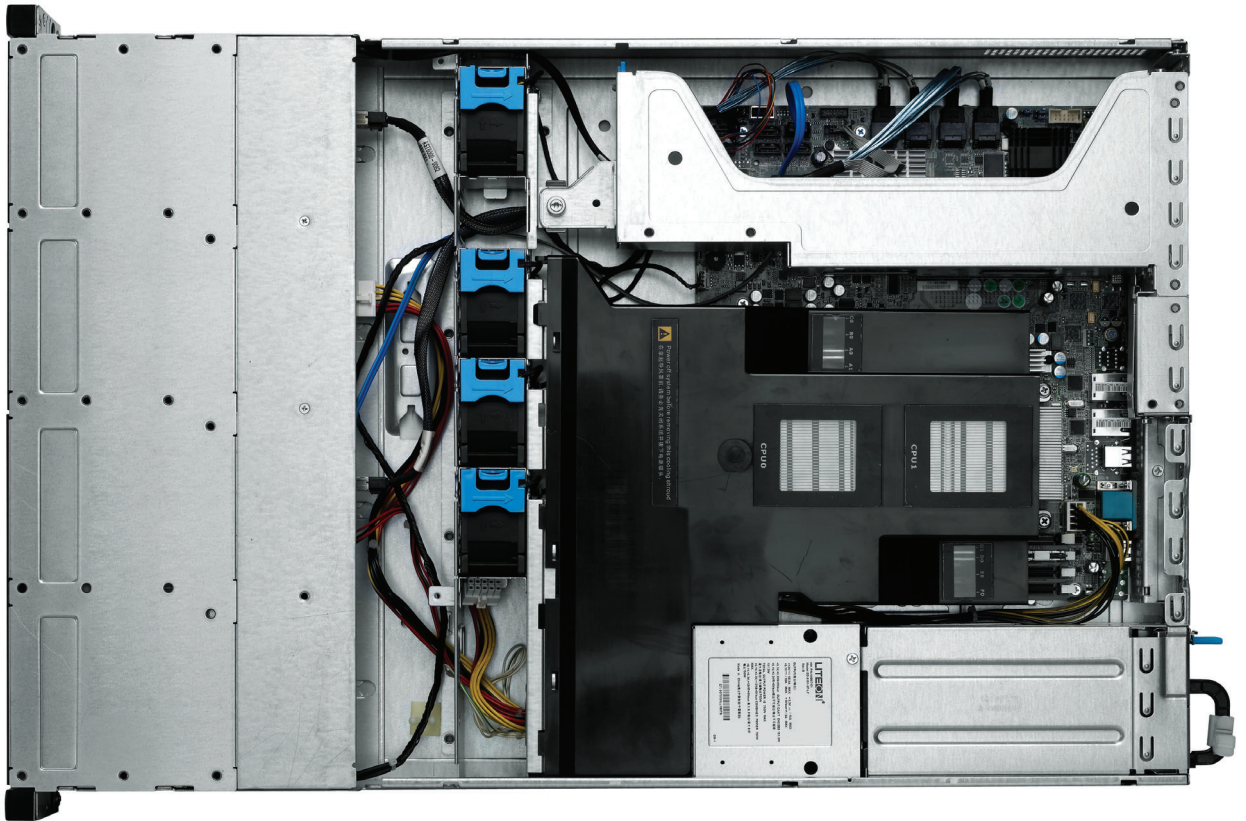
Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache	<div>1U Rack top</div> <div></div> <div><div>Front</div><div></div></div> <div><div>Rear</div><div></div></div> <div><ul style="list-style-type: none">• 1U Mechanical; rack-mount only• Black color front; metal case• 17.2"W x 22.4"D x 1.72"H• 436mm W x 568mm D x 43.6mm H• 37.7 lb (17kg) max configuration• Toolless top cover removal• Toolless disk and optical drive removal• Toolless adapter retention<div>Bay 1 5.25", 0.5" high, external, std optical</div><div>Bay 2 3.5", 1" high, external, optional disk</div><div>Bay 3 3.5", 1" high, external, optional disk</div><div>Bay 4 3.5", 1" high, external, optional disk</div><div>Bay 5 3.5", 1" high, external, optional disk</div><div>Slot 1: half-length, full-height, PCI Express 2.0 x16</div></div>
Implementation	Two LGA1366 sockets	
Memory	2GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets** * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>	
Disk bays	Four 3.5" hot-swap (HS) SATA/SAS disk bays	
Disk controller	LSI™ LSI SAS1068E, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID ⁸ 0, 1, 1E support	
Optical	UltraSlim Enhanced DVD±RW	
Diskette	None (use USB port)	
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers	
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slot (see right), enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB, onboard SATA controller	
Riser card	(See Right) One PCI Express 2.0 x16 slot standard	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)	
Internal port	One USB 2.0 connector	
Diagnostics	Diagnostic and system status LEDs on front panel	
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression	
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply(s)	One 600 watts standard, one maximum, variable speed fan, auto-sensing, no redundancy	
Cooling	Five fans standard, five maximum, variable speed	
<div><div>Accessories</div><div>2GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1432</div><div>8GB PC3-10600 DDR3 1333 MHz RDIMM 67Y1464</div><div>500GB² 3.5" SATA HS (7200 rpm) 67Y1401</div><div>1TB 3.5" SATA HS (7200 rpm) 67Y1402</div><div>More accessories on O-ARTsheet</div><div>Other accessories at lenovo.com/accessories</div></div>		
<div><div>Max memory capacity</div><div>64GB with eight 8GB RDIMMs</div></div>		
<div><div>Max internal capacity</div><div>3.5" SATA HS: 8.0TB with four 2TB 3.5" SATA disks</div><div>3.5" SAS HS: 2.4TB with four 600GB 3.5" SAS disks</div></div>		
<div><div>Limited Warranty¹</div><div>⇒ 1-year parts and labor</div><div>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays)</div><div>⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty</div><div>• Onsite service upgrade options (in eligible locations)⁷</div><div>• Post warranty maintenance services</div><div>⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378</div></div>		
<div><div>Virtualization</div><div>Virtualization ready, VMWare Ready™ certified</div></div>		
<div><div>Power-On Hotkey</div><div><ul style="list-style-type: none">• Setup Utility: DEL at startup• Network Boot: F12 at startup• 1068E RAID: Ctrl+E at startup</div></div>		
<div><div>Software Management Tools</div><div><ul style="list-style-type: none">• ThinkServer EasyStartup</div></div>		
<div><div>Security</div><div><ul style="list-style-type: none">• Administrator password• User password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)</div></div>		
RoHS-compliant		



Lenovo ThinkServer RD240



Lenovo ThinkServer RD240



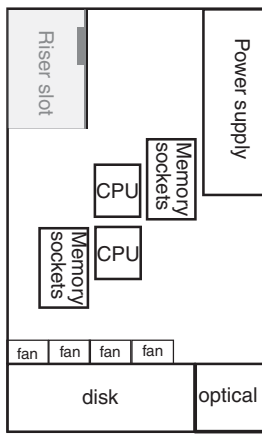
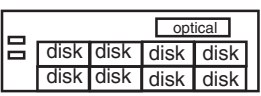

Lenovo ThinkServer RD240

Name	Type-model	Slot x bay	Proc-essor(s)	GHz Cores	Memory DIMMs	Disk size	RAID Battery	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Power supply(s)	Ethernet	Avail date
RD240	1046-17U	3x9	1x E5603	1.60	4	1x4GB	3.5"	8x Hot-swap	1068E	SATA/SAS ⁴	0/1/1E	IPMI	1x750W	2xGb	Mar 11
RD240	1046-18U	3x9	1x E5606	2.13	4	1x4GB	3.5"	8x Hot-swap	1068E	SATA/SAS	0/1/1E	IPMI	1x750W	2xGb	Mar 11
RD240	1046-19U	3x9	1x E5607	2.26	4	1x4GB	3.5"	8x Hot-swap	8708EM2	SATA/SAS	Multi*	KVM	1x750W	2xGb	Mar 11
RD240	1046-1AU	3x9	1x E5620	2.40	4	1x4GB	3.5"	8x Hot-swap	8708EM2	SATA/SAS	Multi	KVM	1x750W	2xGb	Mar 11
RD240	1046-1BU	3x9	1x E5645	2.40	6	1x4GB	3.5"	8x Hot-swap	1068E	SATA/SAS	0/1/1E	KVM	1x750W	2xGb	Mar 11
RD240	1046-1CU	3x9	1x E5645	2.40	6	1x8GB	3.5" Battery	8x Hot-swap	8708EM2	SATA/SAS	Multi	KVM	2x750W	2xGb	Mar 11
RD240	1046-1DU	3x9	2x X5650	2.66	12	2x8GB	3.5" Battery	8x Hot-swap	8708EM2	SATA/SAS	Multi	KVM	2x750W	2xGb	Mar 11

• These models have a 3-year limited warranty¹

• These small and medium business (SMB) models are part of the US TopSeller™ Program

*Multi = RAID 0/1/5/6/10/50/60

Processor(s)	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5606 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor E5607 with quad-core , 4.8GT/s QPI, Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 8MB cache or Intel Xeon Processor E5620 with quad-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1066MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor E5645 with six-core , 5.86GT/s QPI, Intel 64, Virtualization Technology, 1333MHz DDR3 memory controller, and 12MB cache or Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	2U Rack top 		Front 		Rear 	
Implementation	Two LGA1366 sockets	<ul style="list-style-type: none">• 2U Mechanical• Designed for EIA-310 standard 19-inch rack only• Black color front; metal case• 19"W x 27.6"D x 3.44"H• 483mm W x 700mm D x 87.5mm H• 66.6 lb (30kg) max configuration• Toolless top cover removal• Toolless disk and removal• Toolless adapter retention					
Memory	4GB, 8GB, or 16GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3**, ECC, Memory Mirroring , eight 240-pin DIMM sockets***, ** System automatically clocks down for processors with 1066MHz DDR3 memory controller *** Over four DIMMs requires dual processors	Bay 1 5.25", 0.5" high, external, std optical Bay 2 3.5", 1" high, external, optional disk Bay 3 3.5", 1" high, external, optional disk Bay 4 3.5", 1" high, external, optional disk Bay 5 3.5", 1" high, external, optional disk Bay 6 3.5", 1" high, external, optional disk Bay 7 3.5", 1" high, external, optional disk Bay 8 3.5", 1" high, external, optional disk Bay 9 3.5", 1" high, external, optional disk					
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>	Slot 1: full-length, full-height, PCI Express 2.0 x8 Slot 2: full-length, full-height, PCI Express 2.0 x8**** Slot 3: half-length, full-height, PCI Express 2.0 x8**** **** x4 electrical					
Disk bays	Eight 3.5" hot-swap (HS) SATA/SAS disk bays						
Disk controller	<i>Some:</i> LSI™ LSISAS1068E, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1E support <i>Some:</i> ThinkServer 8708EM2 SAS RAID Controller, PCI Express bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support <i>Some:</i> Battery backed cache integrated						
Optical	UltraSlim Enhanced DVD±RW						
Diskette	None (use USB port)						
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers						
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right), links to LSISAS1068E, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB	Virtualization Virtualization ready, VMWare Ready™ certified					
Riser card	(See Right) One PCI Express 2.0 x8, two PCI Express 2.0 x8 (x4 electrical) slots standard	Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: DEL at startup• Network Boot: F12 at startup• 1068E RAID: Ctrl+C at startup• 8708EM2 RAID: Ctrl+H at startup					
Front ports	Two USB 2.0						
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)						
Internal port	One USB 2.0 connector						
Diagnostics	Diagnostic and system status LEDs on front panel						
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression	Software Management Tools <ul style="list-style-type: none">• ThinkServer EasyStartup					
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	Security <ul style="list-style-type: none">• Administrator password• User password• Boot sequence control• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (all)					
Keyboard	None (use USB port)						
Mouse	None (use USB port)						
Power supply(s)	One or two 750 watts standard, two maximum, variable speed fan, auto-sensing, redundant with two power supplies						
Cooling	Four fans standard, four maximum, variable speed	RoHS-compliant					

See footnotes for important warranty information
US models announced March 1, 2011

Name	Type-model	Slot x bay	Proc-essor(s)	GHz Cores	Memory DIMMs	Disk size	RAID Battery	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Power supply(s)	Ethernet	Avail date
RD240	1048-14U	3x9	1xE5603	1.60 4	1x2GB	3.5"		8xHot-swap	1068E	SATA/SAS ⁴	0/1/1E	IPMI	1x750W	2xGb	Mar 11
≡ RD240	1048-15U	3x9	1xE5649	2.53 6	1x4GB	3.5"	Battery	8xHot-swap	8708E	SATA/SAS	Multi*	KVM	1x750W	2xGb	Mar 11

*Multi = RAID 0/1/5/6/10/50/60

Processor(s)	Up to two processors, one processor standard, Intel® Xeon® Processor E5603 with quad-core , 4.8GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Virtualization Technology, 1066MHz DDR3 memory controller, and 4MB cache or Intel Xeon Processor E5649 with six-core , 5.86GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	<div>2U Rack top</div> <div></div> <div><ul style="list-style-type: none">• 2U Mechanical• Designed for EIA-310 standard 19-inch rack only• Black color front; metal case• 19"W x 27.6"D x 3.44"H• 483mm W x 700mm D x 87.5mm H• 66.6 lb (30kg) max configuration• Toolless top cover removal• Toolless disk removal• Toolless adapter retention</div> <div>Bay 1 5.25", 0.5" high, external, std optical</div> <div>Bay 2 3.5", 1" high, external, optional disk</div> <div>Bay 3 3.5", 1" high, external, optional disk</div> <div>Bay 4 3.5", 1" high, external, optional disk</div> <div>Bay 5 3.5", 1" high, external, optional disk</div> <div>Bay 6 3.5", 1" high, external, optional disk</div> <div>Bay 7 3.5", 1" high, external, optional disk</div> <div>Bay 8 3.5", 1" high, external, optional disk</div> <div>Bay 9 3.5", 1" high, external, optional disk</div> <div>Slot 1: full-length, full-height, PCI Express 2.0 x8</div> <div>Slot 2: full-length, full-height, PCI Express 2.0 x8***</div> <div>Slot 3: half-length, full-height, PCI Express 2.0 x8***</div> <div>*** x4 electrical</div>
Implementation	Two LGA1366 sockets	
Memory	2GB or 4GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>	
Disk bays	Eight 3.5" hot-swap (HS) SATA/SAS disk bays	
Disk controller	<i>Some:</i> LSI™ LSI SAS1068E, PCI Express® bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID® 0, 1, 1E support <i>Some:</i> ThinkServer 8708ELP SAS RAID Controller, PCI Express bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support <i>Some:</i> Battery backed cache integrated	
Optical	UltraSlim Enhanced DVD±RW	
Diskette	None (use USB port)	
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers	
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right), links to LSI SAS1068E, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB	
Riser card	(See Right) One PCI Express 2.0 x8, two PCI Express 2.0 x8 (x4 electrical) slots standard	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)	
Internal port	One USB 2.0 connector	
Diagnostics	Diagnostic and system status LEDs on front panel	
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression	
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply(s)	One 750 watts standard, two maximum, variable speed fan, auto-sensing, redundant with two power supplies	
Cooling	Four fans standard, four maximum, variable speed	
Max memory capacity 64GB with eight 8GB PC3-10600 DDR3 RDIMMs		Virtualization Virtualization ready, VMWare Ready™ certified
Max internal capacity 3.5" SATA HS: 16.0TB with eight 2TB HS SATA disks 3.5" SAS HS: 4.8TB with eight 600GB HS SAS disks		Power-On Hotkey • Setup Utility: DEL at startup • Network Boot: F12 at startup • 1068E RAID: Ctrl+C at startup • 8708ELP RAID: Ctrl+H at startup
		Software Management Tools • ThinkServer EasyStartup
Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty • Onsite service upgrade options (in eligible locations) ⁷ • Post warranty maintenance services ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378		Security • Administrator password • User password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • USB port disablement (all) RoHS-compliant

See footnotes for important warranty information

US models announced March 1, 2011

≡ US model withdrawn effective August 2011

Name	Type-model	Slot x bay	Proc-essor(s)	GHz Cores	Memory DIMMs	Disk size	RAID Battery	Disk bays	Disk Controller	Disk type	RAID Int	System mgmt	Power supply(s)	Ethernet	Avail date
RD240	1048-16U	3x9	2xX5650	2.66 12	2x4GB	3.5"	Battery	8xHot-swap	8708EM2	SATA/SAS ⁴	Multi*	KVM	2x750W	2xGb	Jul 11
RD240	1048-17U	3x9	1xE5649	2.53 6	1x4GB	3.5"	Battery	8xHot-swap	8708EM2	SATA/SAS	Multi	KVM	1x750W	2xGb	Jul 11

*Multi = RAID 0/1/5/6/10/50/60

Processor(s)	Up to two processors, one or two processors standard, Intel® Xeon® Processor E5649 with six-core , 5.86GT/s (giga-transfers/second) QPI (QuickPath Interconnect), Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache Intel Xeon Processor X5650 with six-core , 6.4GT/s QPI, Intel 64, Hyper-Threading Technology, Virtualization Technology, Turbo Boost Technology, 1333MHz DDR3 memory controller, and 12MB cache	
Implementation	Two LGA1366 sockets	
Memory	4GB or 8GB std, 64GB max (32GB per processor), RDIMM, PC3-10600 1333MHz DDR3*, ECC, Memory Mirroring , eight 240-pin DIMM sockets**, * System automatically clocks down for processors with 1066MHz DDR3 memory controller ** Over four DIMMs requires dual processors	
Graphics	Onboard Aspeed AST2050 graphics/management processor, one VGA DB-15 on rear, 8MB; <i>Maximum resolution: 1600x1200@60Hz</i>	
Disk bays	Eight 3.5" hot-swap (HS) SATA/SAS disk bays	
Disk controller	ThinkServer 8708EM2 SAS RAID Controller, PCI Express bus, SATA 3.0Gb/s, SAS 3.0Gb/s, RAID 0, 1, 5, 6, 10, 50, 60 support; Battery backed cache integrated	
Optical	UltraSlim Enhanced DVD±RW	
Diskette	None (use USB port)	<p>• 2U Mechanical</p> <ul style="list-style-type: none"> Designed for EIA-310 standard 19-inch rack only Black color front; metal case 19"W x 27.6"D x 3.44"H 483mm W x 700mm D x 87.5mm H 66.6 lb (30kg) max configuration Toolless top cover removal Toolless disk removal Toolless adapter retention <p>Bay 1 5.25", 0.5" high, external, std optical</p> <p>Bay 2 3.5", 1" high, external, optional disk</p> <p>Bay 3 3.5", 1" high, external, optional disk</p> <p>Bay 4 3.5", 1" high, external, optional disk</p> <p>Bay 5 3.5", 1" high, external, optional disk</p> <p>Bay 6 3.5", 1" high, external, optional disk</p> <p>Bay 7 3.5", 1" high, external, optional disk</p> <p>Bay 8 3.5", 1" high, external, optional disk</p> <p>Bay 9 3.5", 1" high, external, optional disk</p> <p>Slot 1: full-length, full-height, PCI Express 2.0 x8</p> <p>Slot 2: full-length, full-height, PCI Express 2.0 x8***</p> <p>Slot 3: half-length, full-height, PCI Express 2.0 x8***</p> <p>*** x4 electrical</p>
Ethernet	Two Gigabit Ethernet ports, dual Intel 82574L controllers	
Chipset	Intel 5500 Chipset , Intel I/O Hub (IOH) for PCI Express slots 1-3 (see right), links to LSISAS1068E, enterprise south bridge interface (ESI) to Intel I/O Controller Hub 10 RAID (ICH10R) for USB	
Riser card	(See Right) One PCI Express 2.0 x8, two PCI Express 2.0 x8 (x4 electrical) slots standard	
Front ports	Two USB 2.0	
Rear ports	Four USB 2.0, external monitor (VGA DB-15), serial (9-pin), two ethernet (RJ-45)	
Internal port	One USB 2.0 connector	
Diagnostics	Diagnostic and system status LEDs on front panel	
Systems mgmt	Onboard Aspeed AST2050 graphics/management processor <i>IPMI model(s):</i> IPMI 2.0-compliant baseboard management controller (BMC), storage over IP, remote platform flash, BIOS update, USB 2.0 virtual hub <i>KVM model(s):</i> IPMI functions PLUS KVM supported, 24bit high quality video compression	
Prerequisites	Monitor, keyboard, mouse, SATA/SAS disk, rack, OS	
Keyboard	None (use USB port)	
Mouse	None (use USB port)	
Power supply(s)	One or two 750 watts standard, two maximum, variable speed fan, auto-sensing, redundant with two power supplies	
Cooling	Four fans standard, four maximum, variable speed	

Max memory capacity 64GB with eight 8GB PC3-10600 DDR3 RDIMMs		Virtualization Virtualization ready, VMWare Ready™ certified	
Max internal capacity 3.5" SATA HS: 16.0TB with eight 2TB HS SATA disks 3.5" SAS HS: 4.8TB with eight 600GB HS SAS disks		Power-On Hotkey <ul style="list-style-type: none"> Setup Utility: DEL at startup Network Boot: F12 at startup 1068E RAID: Ctrl+C at startup 8708EM2 RAID: Ctrl+H at startup 	
Limited Warranty¹ ⇒ 3-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays) ⇒ ThinkPlus™ services available; see lenovo.com/thinkplus/warranty <ul style="list-style-type: none"> Onsite service upgrade options (in eligible locations)⁷ Post warranty maintenance services ⇒ 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378		Software Management Tools • ThinkServer EasyStartup	
		Security <ul style="list-style-type: none"> Administrator password User password Boot sequence control Boot without keyboard, mouse, diskette Serial port I/O control USB port disablement (all) 	
		RoHS-compliant	

See footnotes for important warranty information
US model(s) announced July 12, 2011

- ***This model has a 1-year limited warranty¹***
- ***High performance, scalability, and remote management supported at value price point***

See footnotes for important warranty information
US model announced March 1, 2011

Partial list of accessories supported on Lenovo® ThinkServer TD230, RD230, RD240.

ThinkServer Ready accessories are available through Lenovo Business Partners. Locate a Business Partner near you at: bplocator.lenovo.com

Processor⁵⁰**TD230:**

Intel® Xeon® E5503 Processor Option Kit	67Y1448	ann	07/27/10
Intel Xeon E5506 Processor Option Kit	67Y1449	ann	07/27/10
Intel Xeon E5507 Processor Option Kit	67Y1458	ann	07/27/10
Intel Xeon E5620 Processor Option Kit	67Y1457	ann	07/27/10
Intel Xeon L5609 Processor Option Kit	67Y1450	ann	01/25/11
Intel Xeon E5630 Processor Option Kit	67Y1456	ann	01/25/11
Intel Xeon E5640 Processor Option Kit	67Y1453	ann	01/25/11
Intel Xeon X5650 Processor Option Kit	67Y1455	ann	01/25/11
Intel Xeon X5660 Processor Option Kit	67Y1454	ann	01/25/11
Intel Xeon X5667 Processor Option Kit	67Y1452	ann	01/25/11
Intel Xeon X5670 Processor Option Kit	67Y1451	ann	01/25/11
Intel Xeon E5603 Processor Option Kit	0A89385	ann	03/01/11
Intel Xeon E5606 Processor Option Kit	0A89386	ann	03/01/11
Intel Xeon E5607 Processor Option Kit	0A89387	ann	03/01/11
Intel Xeon E5645 Processor Option Kit	0A89388	ann	03/01/11
Intel Xeon E5649 Processor Option Kit	0A89389	ann	03/01/11
Intel Xeon X5672 Processor Option Kit	0A89390	ann	03/01/11
Intel Xeon X5675 Processor Option Kit	0A89391	ann	03/01/11

RD230:

Intel Xeon E5503 Processor Option Kit	67Y1483	ann	07/27/10
Intel Xeon E5506 Processor Option Kit	67Y1444	ann	07/27/10
Intel Xeon E5507 Processor Option Kit	67Y1493	ann	07/27/10
Intel Xeon E5620 Processor Option Kit	67Y1492	ann	07/27/10
Intel Xeon E5640 Processor Option Kit	67Y1488	ann	07/27/10
Intel Xeon L5609 Processor Option Kit	67Y1485	ann	01/25/11
Intel Xeon E5630 Processor Option Kit	67Y1491	ann	01/25/11
Intel Xeon X5650 Processor Option Kit	67Y1490	ann	01/25/11
Intel Xeon X5660 Processor Option Kit	67Y1489	ann	01/25/11
Intel Xeon X5667 Processor Option Kit	67Y1487	ann	01/25/11
Intel Xeon X5670 Processor Option Kit	67Y1486	ann	01/25/11
Intel Xeon E5603 Processor Option Kit	0A89392	ann	03/01/11
Intel Xeon E5606 Processor Option Kit	0A89393	ann	03/01/11
Intel Xeon E5607 Processor Option Kit	0A89394	ann	03/01/11
Intel Xeon E5645 Processor Option Kit	0A89395	ann	03/01/11
Intel Xeon E5649 Processor Option Kit	0A89396	ann	03/01/11
Intel Xeon X5672 Processor Option Kit	0A89397	ann	03/01/11
Intel Xeon X5675 Processor Option Kit	0A89398	ann	03/01/11

RD240:

Intel Xeon E5503 Processor Option Kit	67Y1466	ann	07/27/10
Intel Xeon E5506 Processor Option Kit	67Y1467	ann	07/27/10
Intel Xeon E5507 Processor Option Kit	67Y1476	ann	07/27/10
Intel Xeon E5620 Processor Option Kit	67Y1475	ann	07/27/10
Intel Xeon E5640 Processor Option Kit	67Y1471	ann	07/27/10
Intel Xeon L5609 Processor Option Kit	67Y1468	ann	01/25/11
Intel Xeon E5630 Processor Option Kit	67Y1474	ann	01/25/11
Intel Xeon X5650 Processor Option Kit	67Y1473	ann	01/25/11
Intel Xeon X5660 Processor Option Kit	67Y1472	ann	01/25/11
Intel Xeon X5667 Processor Option Kit	67Y1470	ann	01/25/11
Intel Xeon X5670 Processor Option Kit	67Y1469	ann	01/25/11
Intel Xeon E5603 Processor Option Kit	0A89399	ann	03/01/11
Intel Xeon E5606 Processor Option Kit	0A89400	ann	03/01/11
Intel Xeon E5607 Processor Option Kit	0A89401	ann	03/01/11
Intel Xeon E5645 Processor Option Kit	0A89402	ann	03/01/11
Intel Xeon E5649 Processor Option Kit	0A89403	ann	03/01/11
Intel Xeon X5672 Processor Option Kit	0A89404	ann	03/01/11
Intel Xeon X5675 Processor Option Kit	0A89405	ann	03/01/11

⁵⁰ Additional processor must match the existing processor

Memory**All:**

2GB PC3-10600 DDR3 RDIMM (2R x 8)	67Y1432	ann	07/27/10
4GB PC3-10600 DDR3 RDIMM (2R x 4)	67Y1433	ann	07/27/10

RD230, RD240:

8GB PC3-8500 DDR3 RDIMM (2R x 4)	67Y1464	ann	07/27/10
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Backup**TD230:**

Lenovo 160GB Internal USB RDX Bundle	67Y1394	ann	02/23/10
Lenovo 320GB Internal USB RDX Bundle	67Y1396	ann	02/23/10
Lenovo 500GB Internal USB RDX Bundle	67Y1398	ann	02/23/10
Lenovo 160GB RDX Data Cartridge	67Y1395	ann	02/23/10
Lenovo 320GB RDX Data Cartridge	67Y1397	ann	02/23/10
Lenovo 500GB RDX Data Cartridge	67Y1399	ann	02/23/10

ThinkServer RAID controller and RAID upgrade**TD230:**

SATA RAID 5 Upgrade for onboard RAID	67Y1459	ann	07/27/10
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RD230, RD240:

ThinkServer 8708EM2 Controller (256MB)	67Y2639	ann	03/01/11
ThinkServer 8708EM2 Battery	67Y2640	ann	03/01/11
ThinkServer RAID 700 Adapter (512MB)	67Y2646	ann	11/01/11
ThinkServer RAID 700 Battery	67Y2647	ann	11/01/11

System Management**TD230:**

Remote Management Module 3	67Y1461	ann	07/27/10
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Redundant Power Supply**RD240:**

ThinkServer RD240 Redundant PSU	67Y1497	ann	07/27/10
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Disk Drive**3.5" SATA Direct Cable (DC) and Hot-swap (HS):****TD230, RD230:**

250GB ² 3.5" SATA DC/HS (7200 rpm)	67Y1400	ann	07/27/10
500GB 3.5" SATA DC/HS (7200 rpm)	67Y1401	ann	07/27/10
1TB 3.5" SATA DC/HS (7200 rpm)	67Y1402	ann	07/27/10
2TB 3.5" SATA DC/HS (7200 rpm)	67Y2642	ann	03/01/11

3.5" SATA HS:**RD240:**

250GB 3.5" SATA HS (7200 rpm)	67Y1478	ann	07/27/10
500GB 3.5" SATA HS (7200 rpm)	67Y1479	ann	07/27/10
1TB 3.5" SATA HS (7200 rpm)	67Y1480	ann	07/27/10
2TB 3.5" SATA HS (7200 rpm)	67Y2643	ann	03/01/11

3.5" SAS HS:**TD230 preconfigured with SAS controller, RD230:**

300GB 3.5" SAS HS (15000 rpm)	67Y1437	ann	07/27/10
450GB 3.5" SAS HS (15000 rpm)	67Y1462	ann	07/27/10
600GB 3.5" SAS HS (15000 rpm)	67Y2644	ann	03/01/11

RD240:

300GB 3.5" SAS HS (15000 rpm)	67Y1481	ann	07/27/10
450GB 3.5" SAS HS (15000 rpm)	67Y1482	ann	07/27/10
600GB 3.5" SAS HS (15000 rpm)	67Y2645	ann	03/01/11

Connectivity

Intel PRO/1000 PT Dual Port Ethernet	67Y1393	ann	02/23/10
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Keyboard

Preferred Pro USB Keyboard	73P5220	ann	06/21/05
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Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
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For more information on server accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/thinkserveraccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services for ThinkServer™ TD230, RD240

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html**Training classes**

- The basics on components, diagnostics, troubleshooting, and managing Lenovo servers, delivered in interactive online format

Online Training, Understanding Lenovo Servers	45K4080
Online Training, Understanding Systems Management	45K4081
Installation, ThinkServer Hardware Only	45K4082

ThinkPlus service upgrade options⁷*LOR = Lenovo Onsite Repair***TD230 with 1-year warranty**

3-year LOR 9x5 Next Business Day	45K4062
3-year LOR 9x5 4 hour response	45K4063
4-year LOR 9x5 Next Business Day	51J0731
4-year LOR 9x5 4 hour response	51J0732
5-year LOR 9x5 Next Business Day	51J0733
5-year LOR 9x5 4 hour response	51J0734

TD230 with 3-year warranty

3-year LOR 9x5 4 hour response	45K4066
4-year LOR 9x5 Next Business Day	51J0735
4-year LOR 9x5 4 hour response	51J0736
5-year LOR 9x5 Next Business Day	51J0737
5-year LOR 9x5 4 hour response	51J0738

RD230, RD240 with 1-year warranty

3-year LOR 9x5 Next Business Day	45K5305
3-year LOR 9x5 4 hour response	45K5306
4-year LOR 9x5 Next Business Day	51J0747
4-year LOR 9x5 4 hour response	51J0748
5-year LOR 9x5 Next Business Day	51J0749
5-year LOR 9x5 4 hour response	51J0750

RD230, RD240 with 3-year warranty

3-year LOR 9x5 4 hour response	45K4076
4-year LOR 9x5 Next Business Day	51J0751
4-year LOR 9x5 4 hour response	51J0752
5-year LOR 9x5 Next Business Day	51J0753
5-year LOR 9x5 4 hour response	51J0754

ThinkPlus Priority Support

- 24x7 support with priority routing and advanced level technicians

TD230 with 1-year warranty

3-year Priority Support	45K4064
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TD230 with 3-year warranty

3-year Priority Support	45K4067
3-year Priority 4 Support	45K4068

RD230, RD240 with 1-year warranty

3-year Priority Support	45K5307
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RD230, RD240 with 3-year warranty

3-year Priority Support	45K4077
3-year Priority 4 Support	45K4078

ThinkPlus Priority Support with Hard Disk Drive Retention

- 24x7 support with priority routing and advanced level technicians
- Hard Disk Drive Retention (HDDR) means customer keeps disk

*HDDR = Hard Disk Drive Retention***TD230 with 3-year warranty**

3-year Priority Support with HDDR	45K5447
3-year Priority 4 Support with HDDR	45K5448

RD230, RD240 with 3-year warranty

3-year Priority Support with HDDR	45K5455
3-year Priority 4 Support with HDDR	45K5456

ThinkPlus Productivity

- Priority Support
- Online Training, Understanding Lenovo Servers
- One-time hardware installation

3-year ThinkPlus Productivity, TD230 (3-year)	45K4090
3-year ThinkPlus Productivity, RD240 (3-year)	45K4096

The TopSeller™ services are designed to make selling the popular services with TopSeller systems faster and easier. Channel partners should always use TopSeller services with TopSeller systems. TopSeller services part numbers typically provide enhanced discounts and incentives for channel partners. The TopSeller service delivered to the customer is identical to the service delivered using a standard service part number. In situations where a desired service is not offered under a TopSeller service part number or the sale requires a special bid process, use available standard service part numbers.

TopSeller services should always be offered by channel business partners with TopSeller hardware, unless the sale requires special bid pricing or the desired service is not offered as a TopSeller service part.

For more information see:
<http://www1.partnerinfo.lenovo.com/us/en/salestoolkit.shtml>

<p><u>TopSeller service upgrade options for ThinkServer</u></p> <p>ThinkServer with 1-year Onsite warranty LOR = Lenovo Onsite Repair</p> <table><tr><td>3-year LOR 9x5 Next Business Day</td><td>04W8714</td></tr><tr><td>4-year LOR 9x5 Next Business Day</td><td>04W8715</td></tr></table> <p>ThinkServer with 3-year Onsite warranty LOR = Lenovo Onsite Repair</p> <table><tr><td>4-year LOR 9x5 Next Business Day</td><td>04W8716</td></tr></table>	3-year LOR 9x5 Next Business Day	04W8714	4-year LOR 9x5 Next Business Day	04W8715	4-year LOR 9x5 Next Business Day	04W8716	<p><u>TopSeller Priority Support</u></p> <ul style="list-style-type: none">• 24x7 support with priority routing and advanced level technicians <p>ThinkServer with 1-year Onsite warranty</p> <table><tr><td>Add to 3-year warranty coverage - 3-year Priority Support*</td><td>04W8723</td></tr><tr><td>Add to 4-year warranty coverage - 4-year Priority Support*</td><td>04W8724</td></tr></table> <p>ThinkServer with 3-year Onsite warranty</p> <table><tr><td>Add to 4-year warranty coverage - 4-year Priority Support*</td><td>04W8724</td></tr></table> <p>* Covered machine must have concurrent warranty coverage.</p>	Add to 3-year warranty coverage - 3-year Priority Support*	04W8723	Add to 4-year warranty coverage - 4-year Priority Support*	04W8724	Add to 4-year warranty coverage - 4-year Priority Support*	04W8724
3-year LOR 9x5 Next Business Day	04W8714												
4-year LOR 9x5 Next Business Day	04W8715												
4-year LOR 9x5 Next Business Day	04W8716												
Add to 3-year warranty coverage - 3-year Priority Support*	04W8723												
Add to 4-year warranty coverage - 4-year Priority Support*	04W8724												
Add to 4-year warranty coverage - 4-year Priority Support*	04W8724												

Microsoft® Windows Server® for Lenovo ThinkServer

Note:

1. Must run on Lenovo® ThinkServer platform only
2. Minimum hardware requirements are determined by Microsoft

(ROK = Reseller Option Kits)

All Lenovo ThinkServer:

English language

Server 2008 R2 Standard ROK (64) ⁶¹	84978KE
Server 2008 R2 Enterprise ROK (64)	84978LE
Small Business Server 2011 Essentials ROK (64)	84971EE
Small Business Server 2011 Standard ROK (64)	84971SE
Small Business Server 2011 Premium Add-On ROK (64)	84971PE

French language

Small Business Server 2011 Essentials ROK (64)	84971EF
Small Business Server 2011 Standard ROK (64)	84971SF
Small Business Server 2011 Premium Add-On ROK (64)	84971PE

German language

Server 2008 Standard ROK (32, 64) ⁶⁰	84978BG
Server 2008 Enterprise ROK (32, 64)	84978DG
Server 2008 R2 Standard ROK (64)	84978KG
Server 2008 R2 Enterprise ROK (64)	84978LG

Multi-Language (English/Japanese)

Server 2008 R2 Standard ROK (64)	84978OA
Server 2008 R2 Enterprise ROK (64)	84978PA
Server 2008 R2 SP1 Standard ROK (64)	84978OJ
Server 2008 R2 SP1 Enterprise ROK (64)	84978PJ

Multi-Language (English/French/Italian/German/Spanish)

Server 2008 R2 Standard ROK (64)	84978OE
Server 2008 R2 Enterprise ROK (64)	84978PE

TS130, TS430:

Multi-Language (English/Japanese)

Server 2008 R2 Foundations ROK (64)	84978HA
Server 2008 R2 SP1 Foundations ROK (64)	84978HD

Multi-Language (English/French/Italian/German/Spanish)

Server 2008 R2 Foundations ROK (64)	84978HE
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⁶⁰ 32, 64 = available in both 32-bit and 64-bit

⁶¹ 64 = available in 64-bit only

Microsoft Windows Client Access License(s)

Multi-Language

Server 2008 1 user	849781A
Server 2008 5 user	849785A
Small Business Server 2011 Standard 5 user	849711G
Small Business Server 2011 Premium Add-On 5 user	849711K

Microsoft® Windows Server® for Lenovo ThinkServer

Note:

1. Must run on Lenovo® ThinkServer platform only
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(ROK = Reseller Option Kits)

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English language

Server 2008 R2 Standard ROK (64) ⁶¹	84978KE
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Small Business Server 2011 Essentials ROK (64)	84971EE
Small Business Server 2011 Standard ROK (64)	84971SE
Small Business Server 2011 Premium Add-On ROK (64)	84971PE

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Small Business Server 2011 Standard ROK (64)	84971SF
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Server 2008 Standard ROK (32, 64) ⁶⁰	84978BG
Server 2008 Enterprise ROK (32, 64)	84978DG
Server 2008 R2 Standard ROK (64)	84978KG
Server 2008 R2 Enterprise ROK (64)	84978LG

Multi-Language (English/Japanese)

Server 2008 R2 Standard ROK (64)	84978OA
Server 2008 R2 Enterprise ROK (64)	84978PA

Multi-Language (English/French/Italian/German/Spanish)

Server 2008 R2 Standard ROK (64)	84978OE
Server 2008 R2 Enterprise ROK (64)	84978PE

TS130, TS430:

Multi-Language (English/Japanese)

Server 2008 R2 Foundations ROK (64)	84978HA
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Multi-Language (English/French/Italian/German/Spanish)

Server 2008 R2 Foundations ROK (64)	84978HE
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⁶⁰ 32, 64 = available in both 32-bit and 64-bit

⁶¹ 64 = available in 64-bit only

Microsoft Windows Client Access License(s)

Multi-Language

Server 2008 1 user	849781A
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Small Business Server 2011 Standard 5 user	849711G
Small Business Server 2011 Premium Add-On 5 user	849711K

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC, 27709, Attn: Dept ZPYA/B600. Lenovo makes no representation or warranty regarding third party products or services.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less.

³ **Systems with limited onsite service** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges.

⁴ **SATA/SAS:** The system configuration supports the installation of either SATA or SAS disks. A configuration including both SATA and SAS disks is not supported.

⁷ **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

⁸ **RAID:** Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

RAID levels and requirements:

- **RAID 0 (striping)** provides increased performance by writing data across multiple drives.
- **RAID 1 (mirroring)** provides fault tolerance by writing the data on two drives.
- **RAID 5 (striping with parity)** uses distributed parity data to provide fault tolerance more efficiently than RAID 1. Requires three or more drives.
- **RAID 6 (striped set with dual distributed parity)** provides fault tolerance from two drive failures; array continues to operate with up to two failed drives. Requires four drives.
- **RAID 10 (or RAID 1+0)** combines RAID 1 and RAID 0 to create a stripe of mirrors that is fault tolerant while offering increased performance. Requires four drives.
- **RAID 50 (or RAID 5+0)** combines RAID 5 and RAID 0 to create block-level striping with distributed parity improving performance over RAID 5. Requires six drives.
- **RAID 60 (or RAID 6+0)** combines RAID 6 and RAID 0 to create block-level striping with distributed double parity improving performance over RAID 6. Requires eight drives.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

ThinkServer™

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Visit www.lenovo.com/psref for the latest version of Personal Systems Reference.

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Morrisville, NC 27560
U.S.A.

December 2011
svbook.pdf



Personal Systems Reference

Lenovo® Secure Managed Client Storage Array Appliance

- *the centralized data repository for the Secure Managed Client (SMC) alternative client computing solution*

April 2010 - Version 376



Visit www.lenovo.com/psref for the latest version

Lenovo® SMC Storage Array



Lenovo SMC Storage Array - Front

*12 x 3.5" high capacity Hot-swap SATA disk drives
6, 9, and 12TB* raw storage capacities
Hardware-based RAID 5 protection of storage data*



Lenovo SMC Storage Array - Rear

*Supporting 6 gigabit ethernet ports (2 integrated, 4 provided by dual NIC PCIe add-in cards)
Redundant power supply on selected models*

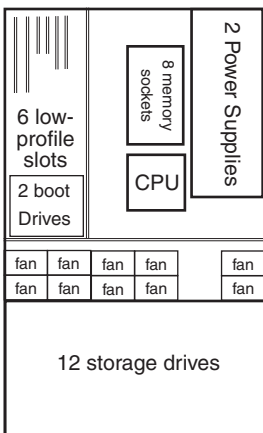
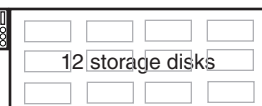

Lenovo® SMC Storage Array (8332)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Proc-essor(s)	GHz	Cores	Memory DIMMs	Memory speed	Boot disks	Storage disks	Disk controller	RAID*	Optical	Power supply(s)	Ethernet	Global	Avail date
SMC-SAN 8332-11U	8332-11U	6x14	1xE5205	1.86	2	2x1GB 667MHz	2x120GB ²	2x120GB	12x500GB	SATA	1/5	None	1x850W	6xGB	Gbl	Jun 09
SMC-SAN 8332-12U	8332-12U	6x14	1xE5205	1.86	2	2x1GB 667MHz	2x120GB	2x120GB	12x750GB	SATA	1/5	None	1x850W	6xGB	Gbl	Jun 09
SMC-SAN 8332-13U	8332-13U	6x14	1xE5205	1.86	2	2x1GB 667MHz	2x120GB	2x120GB	12x1000GB	SATA	1/5	None	1x850W	6xGB	Gbl	Jun 09
SMC-SAN 8332-14U	8332-14U	6x14	1xE5205	1.86	2	2x1GB 667MHz	2x120GB	2x120GB	12x500GB	SATA	1/5	None	2x850W	6xGB	Gbl	Jun 09
SMC-SAN 8332-15U	8332-15U	6x14	1xE5205	1.86	2	2x1GB 667MHz	2x120GB	2x120GB	12x750GB	SATA	1/5	None	2x850W	6xGB	Gbl	Jun 09
SMC-SAN 8332-16U	8332-16U	6x14	1xE5205	1.86	2	2x1GB 667MHz	2x120GB	2x120GB	12x1000GB	SATA	1/5	None	2x850W	6xGB	Gbl	Jun 09

* Two boot disk drives in RAID[®] 1, twelve storage disk drives in RAID 5

- Enterprise-class storage capabilities, supporting up to 12 terabytes of storage
- Proven Intel® design quality and durability

Processor(s)	One processor standard, Intel Xeon® Processor E5205 with dual-core , 1066MHz system bus, and 6MB L2 cache Processor uses FC-LGA package, two LGA771 socket	2U Rack top 	Front  Rear 																																																								
Implementation																																																											
Memory	2GB std, 32GB max, PC2-5300 667MHz DDR2, ECC , fully buffered, eight 240-pin DIMM sockets; std memory in two sockets, six sockets available**, ** DIMMs must be installed in matched pairs																																																										
Graphics	ATI™ ES1000, integrated, 16MB, one VGA DB-15 connector; <i>Maximum resolution: 1600x1200@52Hz</i>																																																										
Disk bays	Two 2.5" internal disk bays for boot drives (non hot-swap) twelve hot-swap (HS) 3.5" external disk bays for storage drives																																																										
Disk Controller	Intel SRCATAWB RAID card, LSI Logic® 1078 SAS ROC I/O processor integrated, PCI Express® bus, SATA 3Gb/s <i>Boot drive: 120GB, 5400 rpm, 2.5"</i> <i>Storage drive: 500GB, 750GB, or 1000GB, 7200 rpm, 3.5"</i>																																																										
SATA disk(s)																																																											
Chipset	Intel 5000P Chipset , Intel ESB2-E I/O Controller Hub, National Semiconductor PC87427 Super I/O																																																										
Ethernet	Six Gigabit Ethernet ports via three ethernet controllers, with two ports per ethernet controller (one ethernet controller integrated, two ethernet controllers on two add-in cards), Intel I/O Acceleration Technology, <i>Integrated:</i> Intel 82563EB dual gigabit ports PHY, Low pin count, high speed interface to Intel ESB2-E, <i>Add-in card:</i> Intel 82571GB dual gigabit ports controller																																																										
Expansion slots	(See Right) Two PCI Express 2.0 x8 slots, two PCI Express 2.0 x4 slots, one 64-bit 100MHz PCI-X slot, low-profile add-in cards only																																																										
Front panel	One 5-pin Mini USB, Power button, Reset button, ID button																																																										
Rear panel	Four USB 2.0 connectors, external monitor (VGA DB-15), serial (9-pin), six ethernet (RJ-45), keyboard (PS2), mouse(PS2), ID LED																																																										
Diagnostics	Fault LED, disk LED, fan LED																																																										
Power supply(s)	One or two power supplies, two maximum, variable speed fan, hot-swap, auto-sensing, redundant with two power supplies <i>11U/12U/13U:</i> One 850-watt Power supply, <i>14U/15U/16U:</i> Two 850-watt Power supplies																																																										
Cooling	Ten system fans std for cooling disk drives, baseboard and disk controller, ten maximum, variable speed, hot-swap																																																										
Limited warranty ¹	3-years limited onsite service ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, service upgrades available																																																										
RoHS-compliant																																																											
Max storage capacity 12TB with twelve 1000GB SATA disks																																																											
Supportable Client Desktop PCs Lenovo ThinkCentre® M58p with Intel vPro™ Technology, all form factors Lenovo ThinkCentre M57p with Intel vPro Technology, Eco Ultra Small form factor only																																																											
Power-On Hotkey <ul style="list-style-type: none">• Setup Utility: F2 at startup• Diagnostic: ESC at startup• Network Boot: F12 at startup																																																											
Security <ul style="list-style-type: none">• Power-on password• Administrator password• Boot without keyboard, mouse, diskette• Serial port I/O control• USB port disablement (front or all)																																																											
		<ul style="list-style-type: none">• 2U Mechanical; rack-mount only• Business black color front; metal case• 19.02"W x 27.83"D x 3.46"H• 483mm W x 707mm D x 87.9mm H• 63.3 lb (28.7kg) max configuration• Toolless top cover removal• Toolless storage disks removal <table><tr><td>Bay 1</td><td>2.5", 0.5" high,</td><td>internal,</td><td>std boot disk</td></tr><tr><td>Bay 2</td><td>2.5", 0.5" high,</td><td>internal,</td><td>std boot disk</td></tr><tr><td>Bay 3</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 4</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 5</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 6</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 7</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 8</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 9</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 10</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 11</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 12</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 13</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr><tr><td>Bay 14</td><td>3.5", 1" high,</td><td>external,</td><td>std storage disk</td></tr></table> <p>Slot 1: low-profile, 64-bit 100MHz PCI-X Slot 2: low-profile, 64-bit 133MHz PCI-X Slot 3: low-profile, PCI Express 2.0 x4 (std RAID card) Slot 4: low-profile, PCI Express 2.0 x4 Slot 5: low-profile, PCI Express 2.0 x8 (std ethernet card) Slot 6: low-profile, PCI Express 2.0 x8 (std ethernet card)</p>		Bay 1	2.5", 0.5" high,	internal,	std boot disk	Bay 2	2.5", 0.5" high,	internal,	std boot disk	Bay 3	3.5", 1" high,	external,	std storage disk	Bay 4	3.5", 1" high,	external,	std storage disk	Bay 5	3.5", 1" high,	external,	std storage disk	Bay 6	3.5", 1" high,	external,	std storage disk	Bay 7	3.5", 1" high,	external,	std storage disk	Bay 8	3.5", 1" high,	external,	std storage disk	Bay 9	3.5", 1" high,	external,	std storage disk	Bay 10	3.5", 1" high,	external,	std storage disk	Bay 11	3.5", 1" high,	external,	std storage disk	Bay 12	3.5", 1" high,	external,	std storage disk	Bay 13	3.5", 1" high,	external,	std storage disk	Bay 14	3.5", 1" high,	external,	std storage disk
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Bay 1	2.5", 0.5" high, internal, std boot disk
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Slot 6: low-profile, PCI Express 2.0 x8 (std ethernet card)

See footnotes for important warranty information
US models announced May 26, 2009
US models withdrawn effective January 2010

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Software Offerings - Required Software	Software Offerings - Add-on Software
<p>SMC Workgroup Client</p> <ul style="list-style-type: none"> • User/Image Provisioning and Management • Executive Dashboard • Intel® vPro Management • Storage Array Configuration and Management • Optional Windows PC Management Functions • One Licence per SMC Client <p>SMC Workgroup Professional Client</p> <ul style="list-style-type: none"> • All SMC Workgroup Client features PLUS • Patch Management • One Licence per SMC Client <p>SMC Enterprise Client</p> <ul style="list-style-type: none"> • All SMC Workgroup Professional Client features PLUS • Port and Media Device Control • Application white/blacklist • Application blocking • Spyware removal • Network access control • One Licence per SMC Client 	<p>Lenovo Analytics Manager</p> <ul style="list-style-type: none"> • Measure application performance and end-user response times on a company level • The product is free to use on SMC and Lenovo PC clients • Requires separate download and registration at www.serden.com/lenovo <p>Lenovo Power Analyzer</p> <ul style="list-style-type: none"> • Delivers central reports on overall power consumption of the ThinkCentre, ThinkPad or SMC device based • Capture battery status for all users using a Lenovo ThinkPad. • Free to use on SMC and Lenovo PC clients • Requires a separate download and registration at www.serden.com/lenovo <p>InteractES® for ThinkVantage® Technologies Module</p> <ul style="list-style-type: none"> • Effective analysis of IT environment • End-to-end including the client, server and the network • Dynamic trend information • Compatible with Lenovo and non-Lenovo products. • One license per client <p>More information at www.serden.com/lenovo</p> <p>StorTrends® - iTX Snapshot Assisted Replication Module</p> <ul style="list-style-type: none"> • Enable asynchronously replicate two or more Lenovo SMC Storage Array appliances over a Local Area Network or Wide Area Network • One licence per storage array appliance <p>StorTrends - iTX Sync Replication Module</p> <ul style="list-style-type: none"> • Enable synchronous replication between two Lenovo Storage Arrays over a Local Area Network • One licence is required per storage array appliance. <p>StorTrends - Kiosk/Pristine Boot Module</p> <ul style="list-style-type: none"> • Enable pristine image capability as well as a single image • Help eliminate contamination of an IT managed images • Resetting the users image to a pristine state everytime the SMC client is rebooted • One licence per storage array appliance <p>LANDesk® Application Virtualization Module</p> <ul style="list-style-type: none"> • Minimize the need for application patching • Compatible with Lenovo and non-Lenovo products <p>More information at www.landesk.com/lenovo</p> <p>For more information on Lenovo's alternative client computing, please visit: http://www.lenovo.com/acc</p>

For more information see:
<http://www.lenovo.com/acc>

PMA = Purchase Maintenance Agreement

SMC Workgroup Client

SMC Workgroup Client Subscription

SMC Workgroup Client 10-999	8336A00
SMC Workgroup Client 1000-4999	8336A01
SMC Workgroup Client 5000-19999	8336A02
SMC Workgroup Client 20000+	8336A03

SMC Workgroup Client Purchase*

SMC Workgroup Client 10-999	43N0511
SMC Workgroup Client 10-999 PMA	8336A12
SMC Workgroup Client 1000-4999	43N0513
SMC Workgroup Client 1000-4999 PMA	8336A13
SMC Workgroup Client 5000-19999	43N0515
SMC Workgroup Client 5000-19999 PMA	8336A14
SMC Workgroup Client 20000+	43N0517
SMC Workgroup Client 20000+ PMA	8336A15

SMC Workgroup Professional Client

SMC Workgroup Professional Client Subscription

SMC Workgroup Professional Client 10-999	8336A25
SMC Workgroup Professional Client 1000-4999	8336A26
SMC Workgroup Professional Client 5000-19999	8336A27
SMC Workgroup Professional Client 20000+	8336A28

SMC Workgroup Professional Client Purchase*

SMC Workgroup Professional Client 10-999	55Y2714
SMC Workgroup Professional Client 10-999 PMA	8336A29
SMC Workgroup Professional Client 1000-4999	55Y2715
SMC Workgroup Professional Client 1000-4999 PMA	8336A30
SMC Workgroup Professional Client 5000-19999	55Y2716
SMC Workgroup Professional Client 5000-19999 PMA	8336A31
SMC Workgroup Professional Client 20000+	55Y2717
SMC Workgroup Professional Client 20000+ PMA	8336A32

SMC Enterprise Client

SMC Enterprise Client Subscription

SMC Enterprise Client 10-999	8336A04
SMC Enterprise Client 1000-4999	8336A05
SMC Enterprise Client 5000-19999	8336A06
SMC Enterprise Client 20000+	8336A07

SMC Enterprise Client Purchase*

SMC Enterprise Client 10-999	43N0519
SMC Enterprise Client 10-999 PMA	8336A16
SMC Enterprise Client 1000-4999	43N0521
SMC Enterprise Client 1000-4999 PMA	8336A17
SMC Enterprise Client 5000-19999	43N0523
SMC Enterprise Client 5000-19999 PMA	8336A18
SMC Enterprise Client 20000+	43N0525
SMC Enterprise Client 20000+ PMA	8336A19

Upgrade: SMC Workgroup Client to SMC Enterprise Client

SMC Enterprise Client Subscription

SMC Enterprise Client 10-999	43N0507
SMC Enterprise Client 1000-4999	43N0508
SMC Enterprise Client 5000-19999	43N0509
SMC Enterprise Client 20000+	43N0510

SMC Enterprise Client Purchase*

SMC Enterprise Client 10-999	43N0527
SMC Enterprise Client 10-999 PMA	43N0528
SMC Enterprise Client 1000-4999	43N0529
SMC Enterprise Client 1000-4999 PMA	43N0530
SMC Enterprise Client 5000-19999	43N0531
SMC Enterprise Client 5000-19999 PMA	43N0532
SMC Enterprise Client 20000+	43N0533
SMC Enterprise Client 20000+ PMA	43N0534

Add-on SMC Software Applications

Plug-in Purchase

StorTrends® - iTX Async/Pristine Bundle	8336A33
StorTrends - iTX Snapshot Assisted Replication Module	8336A34
StorTrends - iTX Sync Replication Module	8336A36
StorTrends - Kiosk/Pristine Boot	8336A37

* If Purchase is selected, the corresponding Purchase Maintenance Agreement (PMA) part number must also be selected

Partial list of Lenovo ThinkPlus Services for Lenovo SMC Storage Array

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html

ThinkPlus service upgrade options⁷

LOR = Lenovo Onsite Repair

Lenovo SMC Storage Array with 3-year warranty

3-year LOR 24x7 4-hour response	55Y3321
4-year LOR 9x5 Next Business Day	55Y3319
4-year LOR 24x7 4-hour response	55Y3322
5-year LOR 9x5 Next Business Day	55Y3320
5-year LOR 24x7 4-hour response	55Y3323

ThinkPlus Priority Support for SMC customers

- 9x5 Next Business Day response Lenovo Onsite Repair
- 24x7 support with priority routing and advanced level technicians

Lenovo SMC Storage Array with 3-year warranty

3-year Priority Support	55Y3324
4-year Priority Support	55Y3325
5-year Priority Support	55Y3326

ThinkPlus Priority 4 Support for SMC customers

- 24x7 4-hour response Lenovo Onsite Repair
- 24x7 support with priority routing and advanced level technicians

Lenovo SMC Storage Array with 3-year warranty

3-year Priority 4 Support	55Y3327
4-year Priority 4 Support	55Y3328
5-year Priority 4 Support	55Y3329



Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC, 27709, Attn: Dept ZPYA/B600. Lenovo makes no representation or warranty regarding third party products or services.

¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less.

³ **Systems with limited onsite service** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges.

⁴ **SATA/SAS:** The system configuration supports the installation of either SATA or SAS disks. A configuration including both SATA and SAS disks is not supported.

⁷ **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

⁸ **RAID:** Supported RAID levels for a system will vary from the stated capabilities of the RAID controller due to dependencies on the number and capacity of physical disks in the system and on customer requirements for performance, fault tolerance, or data redundancy.

RAID levels and requirements:

- **RAID 0 (striping)** provides increased performance by writing data across multiple drives.
- **RAID 1 (mirroring)** provides fault tolerance by writing the data on two drives.
- **RAID 5 (striping with parity)** uses distributed parity data to provide fault tolerance more efficiently than RAID 1. Requires three or more drives.
- **RAID 6 (striped set with dual distributed parity)** provides fault tolerance from two drive failures; array continues to operate with up to two failed drives. Requires four drives.
- **RAID 10 (or RAID 1+0)** combines RAID 1 and RAID 0 to create a stripe of mirrors that is fault tolerant while offering increased performance. Requires four drives.
- **RAID 50 (or RAID 5+0)** combines RAID 5 and RAID 0 to create block-level striping with distributed parity improving performance over RAID 5. Requires six drives.
- **RAID 60 (or RAID 6+0)** combines RAID 6 and RAID 0 to create block-level striping with distributed double parity improving performance over RAID 6. Requires eight drives.

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Morrisville, NC 27560
U.S.A.

April 2010
sanbook.pdf




Personal Systems Reference Lenovo® ThinkVision® Monitors

December 2011 - Version 411




ThinkVision L2321x Wide Monitor

Visit www.lenovo.com/psref for the latest version

Name	D186 Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 18.5-inch monitor• High Definition (HD) ready; 1366x768 resolution• Detachable stand tilts for comfortable viewing• Supports VESA mount (100mm)• 50% less mercury• Kensington® lock slot ready for enhanced security
Case color	Business black	
Type-model	2580-AB1	 Lenovo D186 Wide Monitor
Panel	TFT-LCD, twisted nematic (TN), CCFL backlight	
Viewable image size	18.5" (470mm) diagonal	
Max view area (W x H)	16.1" x 9.1" / 409.8mm x 230.4mm	
Optimum resolution	1366x768 at 60Hz	
Maximum resolution	1366x768 at 60Hz (135MHz max pixel rate)	
Aspect ratio	16:9	
Pixel pitch (mm)	.300mm	
Dot/Pixel per Inch	85 dpi	
Brightness	200 nits or cd/m² (typical)	
Contrast ratio	600:1 (typical)	
Pixel response time	5ms (typical)	
Color gamut	67%	
Anti-reflective	Anti-reflective, anti-glare	
Viewing angle at 10:1 CR	90° (+/- 45°) horizontal, 50° (+/- 25°) vertical	
Stand	Tilt adjustable stand	
Bezel width	<i>Sides:</i> 0.61" (15.6mm); <i>top:</i> 0.67" (17.1mm); <i>bottom:</i> 1.19" (30.1mm)	
Dimensions (HxWxD)	14.6" H x 17.4" W x 8.3" D; 370mm H x 442mm W x 210mm D	
Power supply	16 watts typical, 24 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)	
Weight	7.28 lb; 3.3kg	
Limited warranty ⁴	3 years (includes backlight)	
Available date	January 2010	
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant	
Power management	None	
Ergonomics	ISO 9241-307	
Pixel defect	ISO 9241-307 pixel defect standard	
Emission standards	FCC Class B	
Environmental	WEEE, RoHS (EU Directive 2002/95/EC),	
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768 WXGA: 1280x720, 1280x768 1360x768, 1366x768	
Presets	Standard presets: 20; user settings: 16	
Viewing adjustments	<i>Tilt:</i> 20° back, -5° forward; no lift; no swivel; detachable stand	
Rotating screen	None	
On screen display	On screen display with digital user controls (8 languages)	
Control features	Direct access (control buttons on front) for automatic image setup and adjustment for brightness	
USB hub	None	
Multiple input	None	
Monitor connectors	VGA 15-pin D-shell, analog, blue	
Signal cables	Detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter	
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)	
Security	Security keyhole for attachment of optional cable lock (Kensington lock-compatible)	
Ship group	Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter black power cord	
Limited Warranty		
⇒ 3 year limited warranty⁴		
⇒ International Warranty Service⁵		
⇒ Rapid Replacement Service at 1-800-426-7378		
⇒ Replacement normally arrives in two business days, excluding holidays		
⇒ Lenovo pays all shipping costs for valid warranty claims⁶		
⇒ Service upgrade options:⁷		
• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)		
• 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212)		
• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)		
• 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216)		
• 4 year, mail exchange (51J0589)		
• 5 year, mail exchange (51J0590)		
⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		
Accessories		
Kensington MicroSaver® Cable Lock		73P2582
Kensington Twin Head Cable Lock		45K1620
Lenovo Easy Reach Monitor Stand		55Y9258
See details at www.lenovo.com/support/monitoraccessories		
See all monitors at www.lenovo.com/thinkvision		

See footnotes for important warranty information
US model announced January 12, 2010




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<p>Name L2021 Wide Flat Panel Monitor Case color Business black Type-model 4449-HB1 Panel TFT-LCD, twisted nematic (TN), CCFL backlight Viewable image size 20.0" / 508mm (diagonal) Max view area (W x H) 17.4" x 9.8" / 443mm x 249mm Optimum resolution 1600x900 at 60Hz Aspect ratio 16:9 Pixel pitch (mm) 0.277mm Dot/Pixel per Inch 92 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical) Color gamut 72% Anti-reflective Anti-reflective, anti-glare Vertical frequency 50 to 75 Hz Horizontal frequency 31 to 81 kHz Viewing angle at 5:1 CR 178° (+/- 89°) horizontal, 170° (+/- 85°) vertical Viewing angle at 10:1 CR 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Stand Tilt adjustable stand Bezel width Sides: 0.48" (12.1mm); top: 0.47" (11.9mm); bottom: 0.39" (10.1mm)</p> <p>Dimensions (HxWxD) 14.1" H x 18.7" W x 5.9" D; 357.5mm H x 475.9mm W x 151.2mm D</p> <p>Power supply 22 watts typical, 27 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)</p> <p>Weight 9.24 lb; 4.2kg Limited warranty⁴ 3 years (includes backlight) Available date September 2010</p>	<p>Features</p> <ul style="list-style-type: none"> • All-purpose 20-inch wide flat panel LCD monitor • View images in a 16x9 wide aspect ratio • High-bandwidth Digital Content Protection (HDCP)-compliant • Tilt and cable management stand • Compliance with ENERGY STAR 5.0 • 50% less mercury • Microsoft® Windows® 7 certified 						
<p>VESA-compliant² VESA DDC2B/CI, VESA DPMS-compliant Power management ENERGY STAR® 5.0 Ergonomics ISO 9241-307 Emission standards MPR-2, FCC Class B Environmental EPEAT™ Gold rating, TCO (TCO Displays 5.0), WEEE, RoHS (EU Directive 2002/95/EC)</p> <p>Preset resolutions VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 WXGA: 1280x720, 1280x768, 1280x800, 1366x768 SXGA: 1280x1024 WXGA+: 1440 x 900, 1600x900 Presets / user settings Standard presets: 25; user settings: 20</p>	 <p>Lenovo L2021 Wide Monitor</p>  <p>Lenovo L2021 Wide Monitor rear view with cable management</p>						
<p>Viewing adjustments Tilt: 20° back, -5° forward; detachable stand Rotating screen None On screen display On screen display with digital user controls (8 languages) Control features Direct access (control buttons on front) for automatic image setup USB hub None Multiple input Multiple input (two different PCs attach to two different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D) for digital attach [white], HDCP-compliant Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end (for digital connector), 1.8 meter Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (75mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</p> <p>Ship group Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, digital signal cable, 1.8m power cord</p>							
<p>Limited Warranty</p> <p>⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷</p> <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) <p>⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</p>	<p>Accessories</p> <table> <tr> <td>ThinkVision Soundbar</td> <td>45K1263</td> </tr> <tr> <td>Kensington® MicroSaver® Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision</p>	ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
ThinkVision Soundbar	45K1263						
Kensington® MicroSaver® Cable Lock	73P2582						
Kensington Twin Head Cable Lock	45K1620						

<p> Name LS2221 Wide Flat Panel Monitor Case color High gloss black Type-model 5453-LS1 Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size 21.5" (546mm) diagonal Max view area (W x H) 18.76" x 10.55" (476.6mm x 268.1mm) Native resolution 1920x1080 Aspect ratio 16:9 Pixel pitch (mm) .248mm Dot/Pixel per Inch 103 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Dynamic contrast ratio 10000000:1 Pixel response time 5ms (typical) Color gamut 72% Viewing angle at 10:1 CR 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Stand Tilt adjustable stand Bezel width Sides: 0.925" (23.5mm) Dimensions (HxWxD) 15.38" H x 20.67" W x 7.08" D; 390.7mm H x 525.0mm W x 179.8mm D Power supply 18 watts typical, 30 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply) Weight 8.69 lb; 3.95 kg Limited warranty⁴ 3 year (includes backlight) Available date August 2011 </p>	<p style="text-align: center;">Features</p> <ul style="list-style-type: none"> • Widescreen 21.5-inch monitor • Supports Full HD 1920x1080 resolution • Ergonomic stand tilts • Includes dual input connection for attachment to two systems concurrently (analog and digital) • Mercury free panel and arsenic free glass • Microsoft® Windows® 7 certified 								
<p> VESA-compliant² VESA DDC2B/CI, VESA DPMS-compliant Power management ENERGY STAR® 5.1 Ergonomics ISO 9241-307 Emission standards FCC Class B Environmental TCO (TCO Displays 5.2), WEEE, RoHS </p>	<div> </div> <p style="text-align: center;">Lenovo LS2221 Wide Monitor</p>								
<p> Preset resolutions VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x800, 1280x768, 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 Full HD: 1920x1080 Presets / user settings Standard presets: 32 (VGA), 32 (DVI); user settings: 20 </p>									
<p> Viewing adjustments Tilt: 20° backward, -5° forward Rotating screen None On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup, dual input and NOVO vision Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) </p>									
<p> Ship group Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter digital signal cable, 1.8 meter black power cord </p>									
<p style="text-align: center;">Limited Warranty</p> <p> ➤ 3 year limited warranty⁴ ➤ International Warranty Service⁵ ➤ Rapid Replacement Service at 1-800-426-7378 ➤ Replacement normally arrives in two business days, excluding holidays ➤ Lenovo pays all shipping costs for valid warranty claims⁶ ➤ Service upgrade options⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ➤ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ </p>	<p style="text-align: center;">Accessories</p> <table> <tr> <td>Kensington® MicroSaver® Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td> <td>55Y9258</td> </tr> <tr> <td>ThinkCentre Extend Arm</td> <td>57Y4352</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Easy Reach Monitor Stand	55Y9258	ThinkCentre Extend Arm	57Y4352
Kensington® MicroSaver® Cable Lock	73P2582								
Kensington Twin Head Cable Lock	45K1620								
Lenovo Easy Reach Monitor Stand	55Y9258								
ThinkCentre Extend Arm	57Y4352								

<div>NameLS2421p Wide Flat Panel Monitor</div> <div>Case colorHigh gloss black</div> <div>Type-model4015-LS1</div> <div>PanelTFT-LCD, twisted nematic (TN), White LED backlight</div> <div>Viewable image size23.6" (598mm) diagonal</div> <div>Max view area (W x H)20.52" x 11.54" (521.3mm x 293.2mm)</div> <div>Native resolution1920x1080</div> <div>Aspect ratio16:9</div> <div>Pixel pitch (mm).272mm</div> <div>Dot/Pixel per Inch93 dpi</div> <div>Brightness300 nits or cd/m² (typical)</div> <div>Contrast ratio1000:1 (typical)</div> <div>Dynamic contrast ratio10000000:1</div> <div>Pixel response time5ms (typical)</div> <div>Color gamut72%</div> <div>Viewing angle at 10:1 CR170° (+/- 85°) horizontal, 160° (+/- 80°) vertical</div> <div>StandTilt adjustable stand</div> <div>Bezel widthSides: 0.968" (24.6mm)</div> <div>Dimensions (HxWxD)13.78" H x 22.44" W x 7.47" D; 350.0mm H x 572.0mm W x 189.8mm D</div> <div>Power supply30 watts typical, 35 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)</div> <div>Weight9.79 lb; 4.44 kg</div> <div>Limited warranty⁴3 year (includes backlight)</div> <div>Available dateAugust 2011</div>		<div>Features</div> <div><ul style="list-style-type: none">• Widescreen 23.6-inch monitor• Supports Full HD 1920x1080 resolution• Ergonomic stand tilts• Includes dual input connection for attachment to two systems concurrently (analog and digital)• Mercury free panel and arsenic free glass• Microsoft® Windows® 7 certified</div>
<div>VESA-compliant²VESA DDC2B/CI, VESA DPMS-compliant</div> <div>Power managementENERGY STAR® 5.1</div> <div>ErgonomicsISO 9241-307</div> <div>Emission standardsFCC Class B</div> <div>EnvironmentalTCO (TCO Displays 5.2), WEEE, RoHS</div>	<div></div> <div>Lenovo LS2421p Wide Monitor</div>	
<div>Preset resolutions</div> <div>VGA: 640x350, 640x480, 720x400</div> <div>SVGA: 800x600, 832x624</div> <div>XGA: 1024x768, 1152x864</div> <div>SXGA: 1280x1024</div> <div>WXGA: 1280x800, 1280x768, 1366x768</div> <div>WXGA+: 1440x900, 1600x900</div> <div>WSXGA+: 1680x1050</div> <div>Full HD: 1920x1080</div> <div>Presets / user settings</div> <div>Standard presets: 30 (VGA), 27 (HDMI); user settings: 20</div>		
<div>Viewing adjustments</div> <div>Rotating screenNone</div> <div>On screen displayOn screen display with digital user controls (8 languages)</div> <div>Control featuresDirect access (buttons on front) for automatic image setup, dual input, brightness and NOVO vision</div> <div>USB hubUSB 2.0 Hub (1 port into PC, 4 ports for accessories)</div> <div>Multiple inputDual input (two different PCs attach to two different connectors; one PC shows image; select via button)</div> <div>Monitor connectors(1) VGA 15-pin D-shell, analog, blue</div> <div>(2) HDMI (1.3), digital, black, HDCP-compliant</div> <div>Signal cables(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter</div> <div>(2) detachable, HDMI at each end, digital, 1.8 meter</div> <div>Mounting featuresWall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)</div> <div>SecuritySecurity keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>		
<div>Ship group</div> <div>Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter digital signal cable, 1.8 meter black power cord</div>		

<div>Limited Warranty</div> <div><div>➤ 3 year limited warranty⁴</div><div>➤ International Warranty Service⁵</div><div>➤ Rapid Replacement Service at 1-800-426-7378</div><div>➤ Replacement normally arrives in two business days, excluding holidays</div><div>➤ Lenovo pays all shipping costs for valid warranty claims⁶</div><div>➤ Service upgrade options:⁷<div><div>• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)</div><div>• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)</div><div>• 4 year, mail exchange (51J0589)</div><div>• 5 year, mail exchange (51J0590)</div></div></div><div>➤ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div></div>	<div>Accessories</div> <div><div><div>Kensington® MicroSaver® Cable Lock</div><div>73P2582</div></div><div><div>Kensington Twin Head Cable Lock</div><div>45K1620</div></div><div><div>Lenovo Easy Reach Monitor Stand</div><div>55Y9258</div></div><div><div>ThinkCentre Extend Arm</div><div>57Y4352</div></div></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>
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Name	LT1421 Wide Mobile Monitor	Features <ul style="list-style-type: none">• Widescreen 14-inch mobile monitor designed for ThinkPad• Light and Slim• Super low power (<5 watts)• Supports 1366x768 resolution• Ergonomic stand tilts, provides a 12° - 40° backward tilt adjustment for comfortable viewing• Detachable USB cable for power and signal• Microsoft® Windows® 7 certified
Case color	Raven black	
Type-model	1452-DS6 (with Protective Screen Cover)	
Panel	TFT-LCD, twisted nematic (TN), White LED backlight	
Viewable image size	14.0" (355.6mm) diagonal	  
Max view area (W x H)	12.2" x 6.9" (310.8mm x 175.3mm)	
Optimum resolution	1366x768	
Aspect ratio	16:9	
Pixel pitch (mm)	.227mm	
Dot/Pixel per Inch	112 dpi	
Brightness	200 nits or cd/m ² (typical)	
Contrast ratio	400:1 (typical)	
Pixel response time	8ms (typical)	
Color gamut	45%	
Viewing angle at 10:1 CR	90° (+/- 45°) horizontal, 50° (+/- 25°) vertical	
Stand	Tilt adjustable stand	
Bezel width	Sides: 0.476" (12.1mm)	
Dimensions (HxWxD)	8.58" H x 13.19" W x 0.37-0.85" D; 217.9mm H x 335mm W x 9.3-21.5mm D	
Power supply	4.2 watts typical, 5 watts maximum, <0.1 watts standby/suspend, universal, USB 2.0 cable (no external brick-like power supply) <i>monitor only:</i> 1.91 lb; 0.87 kg; <i>with Protective Screen Cover:</i> 2.31 lb; 1.05 kg	
Weight	3 year (includes backlight)	
Limited warranty ⁴	September 2011	
Available date		
VESA-compliant ²		VESA DDC2B/CI, VESA DPMS-compliant
Power management		ENERGY STAR [®] 5.1
Emission standards		FCC Class B
Environmental		WEEE, RoHS
Preset resolutions		Display mode and resolution auto setup
Protective Screen Cover	Polycarbonate Snap-On Cover protects the LCD Screen while not in use	
Viewing adjustments		<i>Tilt:</i> 12° - 40° backward
Screen control		Brightness (16 levels)
Input		USB input
Monitor connectors		USB 2.0
Signal cables		detachable, USB Y-Type cable, 1.8 meter
Mounting features		None
Security		Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)
Ship group		Monitor, attached tile stand that cannot be removed, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter USB Y-Type cable, Protective Screen Cover
Limited Warranty		
⇒ 3 year limited warranty⁴		
⇒ International Warranty Service⁵		
⇒ Rapid Replacement Service at 1-800-426-7378		
⇒ Replacement normally arrives in two business days, excluding holidays		
⇒ Lenovo pays all shipping costs for valid warranty claims⁶		
⇒ Service upgrade options:⁷		
• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)		
• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)		
• 4 year, mail exchange (51J0589)		
• 5 year, mail exchange (51J0590)		
⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		
Accessories		
Kensington® MicroSaver® Cable Lock		73P2582
Kensington Twin Head Cable Lock		45K1620
See details at www.lenovo.com/support/monitoraccessories		
See all monitors at www.lenovo.com/thinkvision		

<div>NameL1711p Flat Panel Monitor</div> <div>Case colorBusiness black</div> <div>Type-model5047-HB2</div> <div>PanelTFT-LCD, twisted nematic (TN), CCFL backlight</div> <div>Viewable image size17.0" (432mm) diagonal</div> <div>Max view area (W x H)13.3" x 10.6" (337.9mm x 270.3mm)</div> <div>Optimum resolution1280x1024 at 60Hz</div> <div>Maximum resolution1280x1024 at 75Hz (165MHz max pixel rate)</div> <div>Aspect ratio5:4</div> <div>Pixel pitch (mm)0.264mm</div> <div>Dot/Pixel per Inch96 dpi</div> <div>Brightness250 nits or cd/m² (typical)</div> <div>Contrast ratio1000:1 (typical)</div> <div>Pixel response time5ms (typical)</div> <div>Color gamut72%</div> <div>Anti-reflectiveAnti-reflective, anti-glare</div> <div>Vertical frequency50 to 75Hz</div> <div>Horizontal frequency30 to 83kHz</div> <div>Viewing angle at 10:1 CR160° (+/- 80°) horizontal, 160° (+/- 80°) vertical</div> <div>StandTilt height adjustable stand</div> <div>Bezel widthSides: 0.6" (15.3mm); top: 0.72" (18.4mm); bottom: 1.11" (28.1mm)</div> <div>Dimensions (HxWxD)16-20.33" H x 14.6" W x 6.1" D; 405.7-515.7mm H x 370mm W x 155.2mm D</div> <div>Power supply18 watts typical, 21 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)</div> <div>Weight9.3 lb; 4.21kg</div> <div>Limited warranty⁴3 year (includes backlight)</div> <div>Available dateNovember 2009</div>		<div>Features</div> <div><ul style="list-style-type: none">• Regular screen 17-inch monitor• Supports SXGA 1280x1024 resolution• Ergonomic stand tilts and provides a 4.3" (110mm) range height adjustment for comfortable viewing• Includes dual input connection for attachment to two systems concurrently (analog and digital)• Reduces mercury content by 50% and arsenic free glass• Up to 70% recycled packaging materials• Privacy Filter Slot• Microsoft® Windows® 7 certified</div>							
<div>VESA-compliant²VESA DDC2B/CI, VESA DPMS-compliant</div> <div>Power managementENERGY STAR® 5.0</div> <div>ErgonomicsISO 9241-307</div> <div>Emission standardsMPR-2, MPR-3A, FCC Class B</div> <div>EnvironmentalTCO (TCO Displays 5.0), WEEE, RoHS, EPEAT™ Gold rating</div>	<div></div> <div>ThinkVision L1711p Monitor</div>								
<div>Preset resolutionsVGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024</div> <div>Presets / user settingsStandard presets: 17; user settings: 22</div>									
<div>Viewing adjustmentsTilt: 20° back, -3° forward; lift: 4.3" (110mm); detachable stand</div> <div>Rotating screenNone</div> <div>On screen displayOn screen display with digital user controls (8 languages)</div> <div>Control featuresDirect access (buttons on front) for automatic image setup</div> <div>Multiple inputDual input (two different PCs attach to two different connectors; one PC shows image; select via button)</div> <div>Monitor connectors(1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant</div> <div>Signal cables(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter</div> <div>Mounting featuresWall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)</div> <div>SecuritySecurity keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>									
<div>Ship groupMonitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter digital signal cable, 1.8 meter black power cord</div>									
<div>Limited Warranty</div> <div><ul style="list-style-type: none">⇒ 3 year limited warranty⁴⇒ International Warranty Service⁵⇒ Rapid Replacement Service at 1-800-426-7378⇒ Replacement normally arrives in two business days, excluding holidays⇒ Lenovo pays all shipping costs for valid warranty claims⁶⇒ Service upgrade options:⁷<ul style="list-style-type: none">• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)• 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212)• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9215)• 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216)• 4 year, mail exchange (51J0589)• 5 year, mail exchange (51J0590)⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>	<div>Accessories</div> <div><table><tr><td>ThinkVision Soundbar</td><td>45K1263</td></tr><tr><td>Kensington® MicroSaver® Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr><tr><td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr></table></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>	ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Easy Reach Monitor Stand	55Y9258
ThinkVision Soundbar	45K1263								
Kensington® MicroSaver® Cable Lock	73P2582								
Kensington Twin Head Cable Lock	45K1620								
Lenovo Easy Reach Monitor Stand	55Y9258								

See footnotes for important warranty information
US model announced October 20, 2009


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Flat Panel Monitors - US model		Features
Name Case color Type-model Stand Screen Viewable image size (diag) Aspect ratio Pixel pitch (mm) Max view area (inches) Max view area (mm) Viewing angle at 5:1 CR Viewing angle at 10:1 CR Video input Dual input Rotating screen USB Hub	L197 Wide Flat Panel Monitor Business black 4434-HE1 Tilt stand LCD Active Matrix TFT (Thin Film Transistor) 19.0" / 481mm (diagonal) 16:10 .285mm 16.1" x 10.0" (horizontal x vertical) 408mm x 255mm (horizontal x vertical) 176° vertical, 176° horizontal 160° vertical, 170° horizontal Digital or analog (two separate connectors) Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) No pivot None	<ul style="list-style-type: none"> • Widescreen 19-inch flat panel monitor • EPEAT™ Gold rating • View images in a 16:10 wide aspect ratio • Resolution of 1440x900 provides crisp screen images • Slim 14.3mm (0.56") side bezel • High-bandwidth Digital Content Protection (HDCP)-compliant • Includes dual input connection for attachment to two systems concurrently (analog and digital) • Complements the ThinkCentre® and ThinkPad® systems • Microsoft® Windows® Vista™ Premium certified 
Optimum resolution Maximum resolution Vertical frequency Horizontal frequency Preset display modes Presets / user settings Brightness Contrast ratio Pixel response time Color gamut	1440x900 at 60Hz 1440x900 at 75Hz (137MHz maximum pixel rate) 50 to 76Hz 30 to 81kHz VGA: 640x480 60, 66, 72, 75Hz 640x350 70Hz 720x400 70Hz SVGA: 800x600 56, 60, 72, 75Hz 832x624 75Hz XGA: 1024x768 60, 70, 75Hz 1152x864 75Hz SXGA: 1280x1024 60, 70, 75Hz WXGA+: 1440x900 60, 75Hz Standard presets: 20; user settings: 20 250 nits or cd/m ² (typical) 1000:1 (typical) 5ms (typical) 72%	
On screen display Control features Monitor connectors Signal cables Anti-reflective Dimensions Weight Viewing adjustments Mounting features Security	On screen display with digital user controls (7 languages) Direct access (buttons on front) for automatic image setup Two connectors: (1) analog VGA 15-pin D-shell [blue], (2) Digital Visual Interface (DVI-D) for digital (not analog) attach [white], HDCP-compliant Two cables: (1) detachable, VGA 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor (2) detachable digital, DVI-D at each end (for digital connector), 1.8 meter, matches color of monitor Anti-reflective, anti-glare 15.0"H x 17.3"W x 7.0"D / 381mm height x 440mm width x 179mm depth 9.15lb / 4.15kg Tilt: 30° back, 4° forward / no lift, no swivel, detachable stand Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	Lenovo ThinkVision L197 Wide
VESA-compliant ² Power management Ergonomics Pixel defect Emission standards Environmental Ship group Power supply Limited warranty ⁴ Available date	VESA DDC2B/CI, VESA DPMS-compliant ENERGY STAR® 5.0 ISO 13406 Part 2 ¹ ISO 13406-2 Class II pixel defect standard MPR-2, MPR-3A, FCC Class B TCO 03, WEEE, RoHS (EU Directive 2002/95/EC), EPEAT™ Gold rating Monitor, attached stand, Setup Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, digital signal cable, 1.8m black power cord 90-264Vac (universal), integrated (no external brick-like power supply), 22 watts typical, <2 watts standby/suspend 3 year (includes backlight) April 2008	
Limited Warranty		Accessories
➤ 3 year limited warranty⁴ ➤ International Warranty Service⁵ ➤ Rapid Replacement Service at 1-800-426-7378 ➤ Replacement normally arrives in two business days, excluding holidays ➤ Lenovo pays all shipping costs for valid warranty claims⁶ ➤ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ➤ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		Kensington® MicroSaver® Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620 Lenovo Easy Reach Monitor Stand 55Y9258 See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision

Name	L1900p Flat Panel Monitor	<div>Features</div> <ul style="list-style-type: none">• Regular screen 19-inch monitor• Supports SXGA 1280x1024 resolution• Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing• Detachable rear stand cable cover and clip to hide cables• Microsoft® Windows® Vista® certified <div></div> <div>ThinkVision L1900p Monitor with optional ThinkVision Soundbar</div>							
Case color	Business black								
Type-model	4431-HE1								
Panel	TFT-LCD, twisted nematic (TN), CCFL backlight								
Viewable image size	19.0" (483mm) diagonal								
Max view area (W x H)	14.8" x 11.85" (376mm x 301mm)								
Optimum resolution	1280x1024 at 60Hz								
Maximum resolution	1280x1024 at 75Hz (135MHz max pixel rate)								
Aspect ratio	5:4								
Pixel pitch (mm)	.294mm								
Dot/Pixel per Inch	86 dpi								
Brightness	250 nits or cd/m ² (typical)								
Contrast ratio	800:1 (typical)								
Pixel response time	5ms (typical)								
Color gamut	72%								
Anti-reflective	Anti-reflective, anti-glare								
Vertical frequency	56 to 76Hz								
Horizontal frequency	30 to 81kHz								
Viewing angle at 10:1 CR	160° (+/- 80°) horizontal, 160° (+/- 80°) vertical								
Stand	Tilt, swivel, pivot, and height adjustable stand								
Bezel width	<i>Sides: 0.6" (15.3mm); top: 0.66" (16.8mm); bottom: 1.05" (26.8mm)</i>								
Dimensions (HxWxD)	14.9-19.2" H x 16.1" W x 7.4-9.5" D; 378.7-488.7mm H x 408mm W x 188-241.1mm D								
Power supply	17 watts typical, 24 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)								
Weight	12.5 lb; 5.7kg								
Limited warranty ⁴	3 year (includes backlight)								
Available date	November 2008								
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant								
Power management	ENERGY STAR ^{®3} 5.0								
Ergonomics	ISO 13406 Part 2 ¹								
Pixel defect	ISO 13406-2 Class II pixel defect standard								
Emission standards	MPR-2, MPR-3A, FCC Class B								
Environmental	TCO 03, WEEE, RoHS (EU Directive 2002/95/EC), EPEAT™ Gold rating , GREENGUARD [®] certified								
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024								
Presets / user settings	Standard presets: 21; user settings: 17								
Viewing adjustments	<i>Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand</i>								
Rotating screen	Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller)								
On screen display	On screen display with digital user controls (8 languages)								
Control features	Direct access (buttons on front) for automatic image setup								
Multiple input	Multiple input (two different PCs attach to two different connectors; one PC shows image; select via button)								
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant								
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter								
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI [®] (100mm mount)								
Security	Security keyhole for attachment of optional cable lock (Kensington [®] lock-compatible)								
Ship group	Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter digital signal cable, 1.8 meter black power cord								
<div>Limited Warranty</div> <div>⇒ 3 year limited warranty⁴</div> <div>⇒ International Warranty Service⁵</div> <div>⇒ Rapid Replacement Service at 1-800-426-7378</div> <div>⇒ Replacement normally arrives in two business days, excluding holidays</div> <div>⇒ Lenovo pays all shipping costs for valid warranty claims⁶</div> <div>⇒ Service upgrade options:⁷<ul style="list-style-type: none">• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)• 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212)• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)• 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216)• 4 year, mail exchange (51J0589)• 5 year, mail exchange (51J0590)</div> <div>⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>									
<div>Accessories</div> <table><tr><td>ThinkVision Soundbar</td><td>45K1263</td></tr><tr><td>Kensington® MicroSaver® Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr><tr><td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr></table> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/thinkvision</div>		ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Easy Reach Monitor Stand	55Y9258
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<div>Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Maximum resolution Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Anti-reflective Vertical frequency Horizontal frequency Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date</div>		<div>L1951p Wide Flat Panel Monitor Business black 2448-HB6 TFT-LCD, twisted nematic (TN), CCFL backlight 19.0" (481mm) diagonal 16.07" x 10.05" (408.2mm x 255.2mm) 1440x900 at 60Hz 1440x900 at 75Hz (137MHz max pixel rate) 16:10 .285mm 89 dpi 250 nits or cd/m² (typical) 1000:1 (typical) 5ms (typical) 72% Anti-reflective, anti-glare 50 to 76Hz 30 to 81kHz 160° (+/- 80°) horizontal, 160° (+/- 80°) vertical Tilt and height adjustable stand Sides: 0.61" (15.6mm); top: 0.67" (17.1mm); bottom: 1.2" (30.5mm) 14.56-17.71" H x 17.36" W x 6.11" D; 369.9-449.9mm H x 440.9mm W x 155.2mm D 19 watts typical, 23 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply) 9.37 lb; 4.25kg 3 year (includes backlight) October 2009</div>	<div>Features<ul style="list-style-type: none">• Widescreen 19-inch monitor• Supports WXGA+ 1440x900 resolution• Ergonomic stand tilts and provides a 3.1" (80mm) range height adjustment for comfortable viewing• Includes dual input connection for attachment to two systems concurrently (analog and digital)• Reduces mercury content by 50% and arsenic free glass• Up to 70% recycled packaging materials• Privacy Filter Slot• Microsoft® Windows® 7 certified</div>
<div>VESA-compliant² Power management Ergonomics Emission standards Environmental</div>		<div>VESA DDC2B/CI, VESA DPMS-compliant ENERGY STAR® 5.0 ISO 9241-307 MPR-2, MPR-3A, FCC Class B TCO (TCO Displays 5.0), WEEE, RoHS, EPEAT™ Gold rating</div>	<div> ThinkVision L1951p Wide Monitor</div>
<div>Preset resolutions</div>		<div>VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x720, 1360x768 WXGA+ 1440x900</div>	
<div>Presets / user settings</div>		<div>Standard presets: 27; user settings: 20</div>	
<div>Viewing adjustments Rotating screen On screen display Control features Multiple input Monitor connectors</div>		<div>Tilt: 20° back, -3° forward; lift: 3.1" (80mm); detachable stand None On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>	
<div>Signal cables</div>			
<div>Mounting features Security</div>			
<div>Ship group</div>		<div>Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter digital signal cable, 1.8 meter black power cord</div>	
<div>Limited Warranty</div>		<div>Accessories</div>	
<div>⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷<ul style="list-style-type: none">• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)• 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212)• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)• 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216)• 4 year, mail exchange (51J0589)• 5 year, mail exchange (51J0590)⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>		<div>ThinkVision Soundbar 45K1263 Kensington® MicroSaver® Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620 Lenovo Easy Reach Monitor Stand 55Y9258</div>	
		<div>See details at www.lenovo.com/support/monitoraccessories</div>	
		<div>See all monitors at www.lenovo.com/thinkvision</div>	

<p>Name LT1952p Wide Flat Panel Monitor Case color Business black Type-model 2448-MB6 Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size 19" (482.6mm) diagonal Max view area (W x H) 16.07" x 10.05" (408.2mm x 255.2mm) Optimum resolution 1440x900 Max pixel rate 137MHz Aspect ratio 16:10 Pixel pitch (mm) 0.2835mm Dot/Pixel per Inch 89.4 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical) Color gamut 72% Anti-reflective Anti-reflective, anti-glare Viewing angle at 10:1 CR 170° horizontal, 160° vertical Stand Tilt, swivel, and height adjustable stand Bezel width Sides: 0.61" (15.6mm); top: 0.67" (17.1mm); bottom: 1.2" (30.5mm) Dimensions (HxWxD) 15.66-19.99" H x 17.36" W x 6.74" D; 397.7-507.7mm H x 440.9mm W x 171.3mm D Power supply 13 watts typical, 17 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) Weight 9.49 lb; 4.30kg Limited warranty⁴ 3 year (includes backlight) Available date September 2011</p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 19-inch monitor • Supports 1440x900 resolution • Ergonomic stand tilts, swivel, and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Cable Management for better user experience • Mercury and arsenic free glass • Recycled content in plastic material • Privacy Filter Slot • Microsoft® Windows® 7 certified 														
<p>VESA-compliant² VESA DDC2B/CI Power management ENERGY STAR® 5.1 Ergonomics ISO 9241-307 Emission standards MPR-2, FCC Class B Environmental TCO Displays 5.2, TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating, ULE Gold</p>	 <p>ThinkVision LT1952p Wide Monitor</p>														
<p>Preset resolutions VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1366x768 WXGA+: 1440x900 Presets / user settings Standard presets: 22; user settings: 22</p>															
<p>Viewing adjustments Tilt: 20° back, -3° forward; lift: 4.3" (110mm); swivel: +/-180°; detachable stand Rotating screen None On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup, input switch, and brightness Multiple input Triple input (three different PCs attach to three different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Note: DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537) Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</p>															
<p>Ship group Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord</p>	<p>Accessories</p> <table> <tr> <td>DisplayPort to DisplayPort Monitor Cable</td> <td>0A36537</td> </tr> <tr> <td>ThinkVision Soundbar</td> <td>45K1263</td> </tr> <tr> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>Lenovo Security Cable Lock</td> <td>57Y4303</td> </tr> <tr> <td>ThinkCentre Extend Arm</td> <td>57Y4352</td> </tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td> <td>55Y9258</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	DisplayPort to DisplayPort Monitor Cable	0A36537	ThinkVision Soundbar	45K1263	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	ThinkCentre Extend Arm	57Y4352	Lenovo Easy Reach Monitor Stand	55Y9258
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ThinkCentre Extend Arm	57Y4352														
Lenovo Easy Reach Monitor Stand	55Y9258														
<p>Limited Warranty</p> <ul style="list-style-type: none"> ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 															

Name	L2250p Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 22-inch monitor• Supports WSXGA+ 1680x1050 resolution• Ergonomic stand tilts and provides a 3.1" (80mm) range height adjustment for comfortable viewing• Includes dual input connection for attachment to two systems concurrently (analog and digital)• Reduces mercury content by 50% and arsenic free glass• Up to 65% recycled packaging materials• Privacy Filter Slot• Microsoft® Windows® 7 certified
Case color	Business black	
Type-model	2572-HB6	
Panel	TFT-LCD, twisted nematic (TN), CCFL backlight	
Viewable image size	22.0" (559mm) diagonal	
Max view area (W x H)	18.7" x 11.7" (473.8mm x 296.1mm)	
Optimum resolution	1680x1050 at 60Hz	
Maximum resolution	1680x1050 at 75Hz (205MHz max pixel rate)	
Aspect ratio	16:10	
Pixel pitch (mm)	.282mm	
Dot/Pixel per Inch	90 dpi	
Brightness	250 nits or cd/m² (typical)	
Contrast ratio	1000:1 (typical)	
Pixel response time	5ms (typical)	
Color gamut	72%	
Anti-reflective	Anti-reflective, anti-glare	
Vertical frequency	50 to 75Hz	
Horizontal frequency	30 to 83kHz	
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical	
Stand	Tilt and height adjustable stand	
Bezel width	<i>Sides:</i> 0.60" (15.3mm); <i>top:</i> 0.79" (20.0mm); <i>bottom:</i> 1.10" (28.0mm)	
Dimensions (HxWxD)	15.68-18.83" H x 19.92" W x 6.11" D; 398.3-478.3mm H x 506mm W x 155.2mm D	
Power supply	21 watts typical, 28 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)	
Weight	11.49 lb; 5.21kg	
Limited warranty ⁴	3 year (includes backlight)	
Available date	October 2009	
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant	
Power management	ENERGY STAR® 5.0	
Ergonomics	ISO 9241-307	
Emission standards	MPR-2, MPR-3A, FCC Class B	
Environmental	TCO (TCO Displays 5.0), WEEE, RoHS, EPEAT™ Gold rating	
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA+: 1440x900 UXGA: 1600x1000 WSXGA+: 1680x1050	
Presets / user settings	Standard presets: 24; user settings: 20	
Viewing adjustments	<i>Tilt:</i> 20° back, -3° forward; <i>lift:</i> 3.1" (80mm); detachable stand	
Rotating screen	None	
On screen display	On screen display with digital user controls (8 languages)	
Control features	Direct access (buttons on front) for automatic image setup	
USB hub	None	
Camera	None	
Multiple input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)	
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant	
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter	
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)	
Security	Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	
Ship group	Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter digital signal cable, 1.8 meter black power cord	
Limited Warranty		Accessories
⇒ 3 year limited warranty⁴		ThinkVision Soundbar 45K1263
⇒ International Warranty Service⁵		Kensington MicroSaver® Cable Lock 73P2582
⇒ Rapid Replacement Service at 1-800-426-7378		Kensington Twin Head Cable Lock 45K1620
⇒ Replacement normally arrives in two business days, excluding holidays		Lenovo Easy Reach Monitor Stand 55Y9258
⇒ Lenovo pays all shipping costs for valid warranty claims⁶		
⇒ Service upgrade options:⁷		
• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)		See details at www.lenovo.com/support/monitoraccessories
• 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212)		
• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)		See all monitors at www.lenovo.com/thinkvision
• 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216)		
• 4 year, mail exchange (51J0589)		
• 5 year, mail exchange (51J0590)		
⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		

<p>Name L2251p Wide Flat Panel Monitor Case color Business black Type-model 2572-HD6 Panel TFT-LCD, twisted nematic (TN), CCFL backlight Viewable image size 22.0" (559mm) diagonal Max view area (W x H) 18.7" x 11.7" (473.8mm x 296.1mm) Optimum resolution 1680x1050 at 60Hz Maximum resolution 1680x1050 at 75Hz (205MHz max pixel rate) Aspect ratio 16:10 Pixel pitch (mm) .282mm Dot/Pixel per Inch 90 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical) Color gamut 72% Anti-reflective Anti-reflective, anti-glare Vertical frequency 50 to 75Hz Horizontal frequency 30 to 83kHz Viewing angle at 10:1 CR 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Stand Tilt, swivel, pivot, and height adjustable stand Bezel width Sides: 0.60" (15.3mm); top: 0.79" (20.0mm); bottom: 1.10" (28.0mm) Dimensions (HxWxD) 14.46-18.79" H x 19.92" W x 9.50" D; 367.3-477.3mm H x 506mm W x 241.2mm D Power supply 21 watts typical, 28 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply) Weight 12.94 lb; 5.88kg Limited warranty⁴ 3 year (includes backlight) Available date October 2009</p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 22-inch monitor • Supports WSXGA+ 1680x1050 resolution • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Detachable rear stand cable cover and clip to hide cables • Reduces mercury content by 50% and arsenic free glass • Up to 60% recycled packaging materials • Privacy Filter Slot • Microsoft® Windows® 7 certified 								
<p>VESA-compliant² VESA DDC2B/CI, VESA DPMS-compliant Power management ENERGY STAR® 5.0 Ergonomics ISO 9241-307 Emission standards MPR-2, MPR-3A, FCC Class B Environmental TCO (TCO Displays 5.0), WEEE, RoHS, EPEAT™ Gold rating</p>	 <p>ThinkVision L2251p Wide Monitor</p>								
<p>Preset resolutions VGA: 640x350, 640x480, 720x480 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA+: 1440x900 UXGA: 1600x1000 WSXGA+: 1680x1050 Presets / user settings Standard presets: 24; user settings: 20</p>									
<p>Viewing adjustments Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Rotating screen Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller) On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup USB hub None Camera None Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</p>	<p>Ship group Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DisplayPort cable, 1.8 meter black power cord</p>								
<p>Limited Warranty</p> <p>⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷</p> <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) <p>⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</p>	<p>Accessories</p> <table> <tr> <td>ThinkVision Soundbar</td> <td>45K1263</td> </tr> <tr> <td>Kensington® MicroSaver® Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td> <td>55Y9258</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Easy Reach Monitor Stand	55Y9258
ThinkVision Soundbar	45K1263								
Kensington® MicroSaver® Cable Lock	73P2582								
Kensington Twin Head Cable Lock	45K1620								
Lenovo Easy Reach Monitor Stand	55Y9258								

<p> Name LT2252p Wide Flat Panel Monitor Case color Business black Type-model 2572-MB6 Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size 22" (559mm) diagonal Max view area (W x H) 18.7" x 11.7" (473.8mm x 296.1mm) Optimum resolution 1680x1050 Max pixel rate 205MHz Aspect ratio 16:10 Pixel pitch (mm) 0.282mm Dot/Pixel per Inch 90 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical) Color gamut 72% Anti-reflective Anti-reflective, anti-glare Viewing angle at 10:1 CR 170° horizontal, 160° vertical Stand Tilt, swivel, pivot, and height adjustable stand Bezel width Sides: 0.60" (15.3mm); top: 0.79" (20.0mm); bottom: 1.10" (28.0mm) Dimensions (HxWxD) 14.46-18.79" H x 19.92" W x 9.50" D; 367.3-477.3mm H x 506mm W x 241.2mm D Power supply 20 watts typical, 26 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 12.97lb; 5.89kg Weight Limited warranty⁴ 3 year (includes backlight) Available date September 2011 </p>	<p>Features</p> <ul style="list-style-type: none"> • Widescreen 22-inch monitor • Supports 1680x1050 resolution • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Cable Management for better user experience • Mercury and arsenic free glass • Recycled content in plastic material • Privacy Filter Slot • Microsoft® Windows® 7 certified 														
<p> VESA-compliant² VESA DDC2B/CI Power management ENERGY STAR® 5.1 Ergonomics ISO 9241-307 Emission standards MPR-2, FCC Class B Environmental TCO Displays 5.2, TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating, ULE Gold </p>	 <p>ThinkVision LT2252p Wide Monitor</p>														
<p> Preset resolutions VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1280x800, 1366x768 WXGA+: 1440x900 1600x900 WSXGA+: 1680x1050 Presets / user settings Standard presets: VGA/DisplayPort: 26; DVI-D: 25; user settings: 25 </p>															
<p> Viewing adjustments Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Rotating screen Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller) On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup, input switch, and brightness USB hub None Camera None Multiple input Triple input (three different PCs attach to three different connectors; one PC shows image; select via button) Monitor connectors (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D) for digital attach [white], HDCP-compliant </p>	<p> Signal cables (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Note: DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537) Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) </p>														
<p> Ship group Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord </p>															
<p> Limited Warranty ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ </p>	<p> Accessories </p> <table> <tr> <td>DisplayPort to DisplayPort Monitor Cable</td> <td>0A36537</td> </tr> <tr> <td>ThinkVision Soundbar</td> <td>45K1263</td> </tr> <tr> <td>Kensington® MicroSaver® Cable Lock</td> <td>73P2582</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>Lenovo Security Cable Lock</td> <td>57Y4303</td> </tr> <tr> <td>ThinkCentre Extend Arm</td> <td>57Y4352</td> </tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td> <td>55Y9258</td> </tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	DisplayPort to DisplayPort Monitor Cable	0A36537	ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	ThinkCentre Extend Arm	57Y4352	Lenovo Easy Reach Monitor Stand	55Y9258
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Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Maximum resolution Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Anti-reflective Vertical frequency Horizontal frequency Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date	L2251x Wide Flat Panel Monitor Business black 2578-HB6 TFT-LCD, twisted nematic (TN), white LED backlight 22.0" (559mm) diagonal 18.7" x 11.7" / 473.8mm x 296.1mm 1680x1050 at 60Hz 1680x1050 at 75Hz (205MHz max pixel rate) 16:10 .282mm 90 dpi 250 nits or cd/m ² (typical) 1000:1 (typical) 5ms (typical) 68% Anti-reflective, anti-glare 50 to 75Hz 30 to 83kHz 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt, swivel, pivot, and height adjustable stand <i>Sides: 0.60" (15.3mm); top: 0.79" (20.0mm); bottom: 1.10" (28.0mm)</i> 14.97-19.3" H x 19.92" W x 9.50" D; 380.3-490.3mm H x 506mm W x 241.2mm D 21 watts typical, 28 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply) 12.39 lb; 5.63kg 3 year (includes backlight) November 2009	Features <ul style="list-style-type: none"> • Widescreen 22-inch monitor with white LED backlight • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Detachable rear stand cable cover and clip to hide cables • Integrated camera (0.3 megapixel) and microphone • Integrated ambient light sensor and a proximity sensor, save more energy and make viewing more comfortable • Low halogen, mercury free, and arsenic free glass, 92% recycled packaging materials • Privacy Filter Slot • Microsoft® Windows® 7 certified
VESA-compliant² Power management Ergonomics Emission standards Environmental	VESA DDC2B/CI, VESA DPMS-compliant ENERGY STAR ^{®3} 5.0 ISO 9241-307 MPR-2, MPR-3A, FCC Class B TCO (TCO Certified Edge), WEEE, RoHS, EPEAT™ Gold rating	
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA+: 1440x900 UXGA: 1600x1000 WSXGA+: 1680x1050	ThinkVision L2251x Wide Monitor
Presets / user settings	Standard presets: 24; user settings: 20	
Viewing adjustments Rotating screen On screen display Control features USB hub Camera Multiple input Monitor connectors	<i>Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand</i> Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller) On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup USB 2.0 Hub (1 port into PC, 3 ports for accessories) Integrated camera (0.3 megapixel) and microphone Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)	
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter	
Mounting features Security	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	
Ship group	Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DisplayPort cable, 1.8 meter USB cable, 1.8 meter black power cord	

Limited Warranty <ul style="list-style-type: none"> ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 	Accessories <table> <tr> <td>ThinkVision Soundbar</td><td>45K1263</td></tr> <tr> <td>Kensington® MicroSaver® Cable Lock</td><td>73P2582</td></tr> <tr> <td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Easy Reach Monitor Stand	55Y9258
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Kensington Twin Head Cable Lock	45K1620								
Lenovo Easy Reach Monitor Stand	55Y9258								

Name	L2321x Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 23-inch monitor• 1080p full HD support, HDCP-compliant• Function as two monitors, hardware based solution provies 4 patterns of screen split (2:1, 1:1, 1:2, PIP modes).• Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing• Compliance with ENERGY STAR 5.0• Arsenic free glass• Microsoft® Windows® 7 certified						
Case color	Business black							
Type-model	4014-HB6	 ThinkVision L2321x Wide Monitor						
Panel	TFT-LCD, twisted nematic (TN), CCFL backlight							
Viewable image size	23.0" (584mm) diagonal							
Max view area (W x H)	20.04" x 11.28" / 509.2mm x 286.4mm							
Optimum resolution	1920x1080							
Dual screen function	Function as two monitors (need both VGA and DisplayPort connected), hardware based solution provies 4 patterns of screen split (2:1, 1:1, 1:2, PIP)							
Aspect ratio	16:9							
Pixel pitch (mm)	.265mm							
Dot/Pixel per Inch	96 dpi							
Brightness	250 nits or cd/m² (typical)							
Contrast ratio	1000:1 (typical)							
Pixel response time	5ms (typical)							
Color gamut	72%							
Anti-reflective	Anti-reflective, anti-glare							
Vertical frequency	50 to 75Hz							
Horizontal frequency	30 to 83kHz							
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical							
Stand	Tilt, swivel, pivot, and height adjustable stand							
Bezel width	<i>Sides:</i> 0.69" (17.6mm); <i>top:</i> 0.72" (18.2mm); <i>bottom:</i> 0.79" (20.1mm)							
Dimensions (HxWxD)	14.72-19.05" H x 21.49" W x 9.49" D; 373.9-483.9mm H x 545.9mm W x 241.1mm D							
Power supply	24 watts typical, 28 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)							
Weight	14.75 lb; 6.69kg							
Limited warranty ⁴	3 year (includes backlight)							
Available date	July 2010							
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant							
Power management	ENERGY STAR ^{®3} 5.0							
Ergonomics	ISO 9241-307							
Emission standards	MPR-2, FCC Class B							
Environmental	TCO (TCO Certified Edge), WEEE, RoHS, EPEAT™ Gold rating							
Preset resolutions	NTSC, PAL, 640x350, 640x480, 800x600, 832x624, 960x1080, 1024x768, 1152x864, 1280x1024, 1280x1080, 1366x768, 1440x900, 1680x1050, 1920x1080							
Dual image resolution	(2:1): 1280x1080 + 640x1080 (1:2): 640x1080 + 1280x1080 (1:1): 960x1080 + 960x1080 (PIP): 640x480 in 1920x1080							
Presets / user settings	Presets: 26(VGA), 25(DisplayPort); user settings: 20							
Viewing adjustments	<i>Tilt:</i> 30° back, 0° forward; <i>lift:</i> 4.3" (110mm); <i>swivel:</i> +/-45°; detachable stand							
Rotating screen	Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller, do not support image rotation under dual image modes)							
On screen display	On screen display with digital user controls (8 languages)							
Control features	Direct access (buttons on front) for automatic image setup and image select (Dual image [2:1, 1:1, 1:2, PIP modes], Swap, Single VGA, and Single DisplayPort)							
USB hub	USB 2.0 Hub (1 port into PC, 4 ports for accessories)							
Multiple input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)							
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant							
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter							
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI [®] (100mm mount)							
Security	Security keyhole for attachment of optional cable lock (Kensington [®] lock-compatible)							
Ship group	Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, DisplayPort cable, 1.8 meter USB cable, 1.8 meter black power cord							
Limited Warranty <ul style="list-style-type: none">⇒ 3 year limited warranty⁴⇒ International Warranty Service⁵⇒ Rapid Replacement Service at 1-800-426-7378⇒ Replacement normally arrives in two business days, excluding holidays⇒ Lenovo pays all shipping costs for valid warranty claims⁶⇒ Service upgrade options:⁷<ul style="list-style-type: none">• 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209)• 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212)• 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233)• 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216)• 4 year, mail exchange (51J0589)• 5 year, mail exchange (51J0590)⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		Accessories <table><tr><td>ThinkVision Soundbar</td><td>45K1263</td></tr><tr><td>Kensington® MicroSaver® Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr></table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
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Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Maximum resolution Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Anti-reflective Vertical frequency Horizontal frequency Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date	L2440p Wide Flat Panel Monitor Business black 4420-HB2 TFT-LCD, twisted nematic (TN), CCFL backlight 24.0" (610mm) diagonal 20.4" x 12.8" (518.4mm x 324.0mm) 1920x1200 at 60Hz 1920x1200 at 60Hz (205MHz max pixel rate) 16:10 .270mm 94 dpi 300 nits or cd/m ² (typical) 1000:1 (typical) 5ms (typical) 72% Anti-reflective, anti-glare 50 to 75Hz 30 to 94kHz 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt, swivel, pivot, and height adjustable stand <i>Sides: 0.78" (19.9mm); top: 0.78" (19.9mm); bottom: 1.12" (28.4mm)</i> 15.54-19.87" H x 22" W x 8.04-10.13" D; 394.8-504.8mm H x 559.6mm W x 204.3-257.3mm D 35 watts typical, 50 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply) 17.84 lb; 8.09kg 3 year (includes backlight) October 2008	Features <ul style="list-style-type: none"> • Widescreen 24-inch monitor • Supports WUXGA 1920x1200 resolution • High Definition (HD) ready; supports 1080p video • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Detachable rear stand cable cover and clip to hide cables • Carrying handle • 65% recycled packaging materials • Microsoft® Windows® Vista® Premium certified
VESA-compliant² Power management Ergonomics Pixel defect Emission standards Environmental	VESA DDC2B/CI, VESA DPMS-compliant ENERGY STAR® 5.0 ISO 13406 Part 2 ¹ ISO 13406-2 Class II pixel defect standard MPR-2, MPR-3A, FCC Class B TCO 03, WEEE, RoHS (EU Directive 2002/95/EC), EPEAT™ Gold rating , GREENGUARD® certified	
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1360x768 WXGA+: 1440x900 UXGA: 1600x1200 WSXGA+: 1680x1050 WUXGA: 1920x1200	
Presets / user settings	Standard presets: 27; user settings: 20	
Viewing adjustments Rotating screen On screen display Control features USB hub Multiple input Monitor connectors	<i>Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand</i> Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller), On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup USB 2.0 Hub (1 port into PC, 4 ports for accessories) Multiple input (two different PCs attach to two different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant	
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 2.2 meter (2) detachable, DVI-D at each end, digital, 2.2 meter	
Mounting features Security	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	
Ship group	Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 2.2 meter analog signal cable, 2.2 meter digital signal cable, 2.2 meter USB cable, 1.8 meter black power cord	


ThinkVision L2440p Wide Monitor

Limited Warranty <ul style="list-style-type: none"> ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 	Accessories <table> <tr> <td>ThinkVision Soundbar</td><td>45K1263</td></tr> <tr> <td>Kensington® MicroSaver® Cable Lock</td><td>73P2582</td></tr> <tr> <td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	ThinkVision Soundbar	45K1263	Kensington® MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Easy Reach Monitor Stand	55Y9258
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Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Max pixel rate Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut Anti-reflective Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date	LT2452p Wide Flat Panel Monitor Business black 4420-MB2 TFT-LCD, e-IPS, White LED backlight 24" (610mm) diagonal 20.4" x 12.8" (518.4mm x 324.0mm) 1920x1200 202.5MHz 16:10 0.270mm 94 dpi 300 nits or cd/m ² (typical) 1000:1 (typical) 7ms (GtG) 72% Anti-reflective, anti-glare 178° horizontal, 178° vertical Tilt, swivel, pivot, and height adjustable stand <i>Sides: 0.78" (19.9mm); top: 0.78" (19.9mm); bottom: 1.12" (28.4mm)</i> 15.54-19.87" H x 22" W x 10.13" D; 394.8-504.8mm H x 559.6mm W x 257.3mm D 30 watts typical (w/o USB hub), 40 watts maximum (w/o USB hub), <0.5 watts standby/suspend (w/o USB hub), universal, integrated (no external brick-like power supply) 14.70 lb; 6.67kg 3 year (includes backlight) September 2011	Features <ul style="list-style-type: none"> • Widescreen 24-inch monitor • Supports 1920x1200 resolution • High Definition (HD) ready; supports 1080p video • Ergonomic stand tilts, swivels, pivots and provides a 4.3" (110mm) range height adjustment for comfortable viewing • Cable Management for better user experience • Carrying handle • Recycled content in plastic material • Microsoft® Windows® 7 certified
VESA-compliant² Power management Ergonomics Emission standards Environmental	VESA DDC2B/CI ENERGY STAR® 5.1 ISO 9241-307 MPR-2, FCC Class B TCO Displays 5.2, TCO Certified Edge 1.1, WEEE, RoHS, EPEAT™ Gold rating , ULE Gold	 <p>The image shows a black Lenovo ThinkVision LT2452p Wide Monitor. The screen displays a vibrant green abstract pattern. The monitor is mounted on a black stand with a circular base. The Lenovo logo is visible on the bottom bezel.</p>
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1280x800, 1366x768 WXGA+: 1440x900 UXGA: 1600x1200 WSXGA+: 1680x1050 Full HD: 1920x1080 WUXGA: 1920x1200	ThinkVision LT2452p Wide Monitor
Presets / user settings	Standard presets: 30; user settings: 20	
Viewing adjustments Rotating screen On screen display Control features USB hub Multiple input Monitor connectors	<i>Tilt: 30° back, 0° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand</i> Screen pivots 90 degrees from landscape to portrait (requires image rotation support from graphics controller) On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup, input switch, and brightness USB 2.0 Hub (1 port into PC, 4 ports for accessories) Triple input (three different PCs attach to three different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant	
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Note: DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537)	
Mounting features Security	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	
Ship group	Monitor, attached stand, cable cover, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter USB cable, 1.8 meter black power cord	

Limited Warranty <ul style="list-style-type: none"> ⇒ 3 year limited warranty⁴ ⇒ International Warranty Service⁵ ⇒ Rapid Replacement Service at 1-800-426-7378 ⇒ Replacement normally arrives in two business days, excluding holidays ⇒ Lenovo pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ThinkPlus™ part number 41C9209) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9212) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (41C9233) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (41C9216) • 4 year, mail exchange (51J0589) • 5 year, mail exchange (51J0590) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 	Accessories <table> <tr> <td>DisplayPort to DisplayPort Monitor Cable</td><td>0A36537</td></tr> <tr> <td>ThinkVision Soundbar</td><td>45K1263</td></tr> <tr> <td>Kensington MicroSaver Cable Lock</td><td>73P2582</td></tr> <tr> <td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr> <tr> <td>Lenovo Security Cable Lock</td><td>57Y4303</td></tr> <tr> <td>ThinkCentre Extend Arm</td><td>57Y4352</td></tr> <tr> <td>Lenovo Easy Reach Monitor Stand</td><td>55Y9258</td></tr> </table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/thinkvision</p>	DisplayPort to DisplayPort Monitor Cable	0A36537	ThinkVision Soundbar	45K1263	Kensington MicroSaver Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620	Lenovo Security Cable Lock	57Y4303	ThinkCentre Extend Arm	57Y4352	Lenovo Easy Reach Monitor Stand	55Y9258
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Kensington® MicroSaver® Cable Lock from Lenovo
(73P2582)

Kensington Twin Head Cable Lock from Lenovo
(45K1620)

Lenovo Security Cable Lock
(57Y4303)



ThinkVision Soundbar
(45K1263)



Lenovo Easy Reach Monitor Stand
(55Y9258)



ThinkCentre Extend Arm
(57Y4352)



Lenovo USB-to-DVI Monitor Adapter
(45K5296)



Lenovo DisplayPort to VGA Monitor Cable
(57Y4393)
Lenovo DisplayPort to Single-link DVI-D Monitor Cable
(45J7915)
Lenovo Mini-DisplayPort to VGA Monitor Cable
(0A36536)
Lenovo DisplayPort to DisplayPort Monitor Cable
(0A36537)

Monitor Accessories⁴⁶ (all part numbers listed are US option P/N)

Lenovo USB-to-DVI Monitor Adapter **	45K5296	ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable **	57Y4393	ann 08/04/09
DisplayPort to Single-link DVI-D Cable **	45J7915	ann 08/05/08
Lenovo Mini-DisplayPort to VGA Monitor Cable **	0A36536	ann 05/17/11
** Supports a maximum 1920 x 1200 monitor resolution.		
Lenovo DisplayPort to DisplayPort Monitor Cable***	0A36537	ann 09/13/11
***Hardware requirement: All Lenovo systems and monitors with DisplayPort 1.1a or 1.2 interface.		

ThinkVision Soundbar	45K1263	ann 09/16/08
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
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶Compatible on selected Lenovo and ThinkVision monitors.

Compatibility matrix

	USB-to-DVI Adapter (45K5296)	DisplayPort to VGA Cable (57Y4393)	DisplayPort to DVI-D Cable (45J7915)	Mini-Display- Port to VGA Monitor Cable (0A36536)	DisplayPort to DisplayPort Monitor Cable (0A36537)	ThinkVision Soundbar (45K1263)	MicroSaver Cable Lock (73P2582)	Twin Head Cable Lock (45K1620)	Security Cable Lock (57Y4303)	Easy Reach Monitor Stand (55Y9258)	Extend Arm (57Y4352)
LT1421							73P2582	45K1620	57Y4303		
L1711p	45K5296	57Y4393	45J7915	0A36536		45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
D186		57Y4393		0A36536			73P2582	45K1620	57Y4303	55Y9258	57Y4352
L197	45K5296	57Y4393	45J7915	0A36536			73P2582	45K1620	57Y4303	55Y9258	57Y4352
L1900p	45K5296	57Y4393	45J7915	0A36536		45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
L1951p	45K5296	57Y4393	45J7915	0A36536		45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
LT1952p	45K5296	57Y4393	45J7915	0A36536	0A36537	45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
L2021	45K5296	57Y4393	45J7915	0A36536		45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
LS2221				0A36536			73P2582	45K1620	57Y4303	55Y9258	57Y4352
L2250p	45K5296	57Y4393	45J7915	0A36536		45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
L2251p	45K5296	57Y4393		0A36536	0A36537	45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
LT2252p	45K5296	57Y4393	45J7915	0A36536	0A36537	45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
L2251x	45K5296	57Y4393		0A36536	0A36537	45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
L2321x	45K5296	57Y4393		0A36536	0A36537	45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
LS2421p				0A36536	0A36537		73P2582	45K1620	57Y4303	55Y9258	57Y4352
L2440p	45K5296	57Y4393	45J7915	0A36536		45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
LT2452p	45K5296	57Y4393	45J7915	0A36536	0A36537	45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
✖ L2461x		57Y4393		0A36536			73P2582	45K1620	57Y4303	55Y9258	57Y4352
✖ L151	45K5296	57Y4393					73P2582	45K1620		55Y9258	
✖ L151p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L171	45K5296	57Y4393					73P2582	45K1620		55Y9258	
✖ L171p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L172	45K5296	57Y4393					73P2582	45K1620		55Y9258	
✖ L174	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L1700p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ D185	45K5296	57Y4393	45J7915			45K1263	73P2582	45K1620		55Y9258	
✖ L190x	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L191	45K5296	57Y4393					73P2582	45K1620		55Y9258	
✖ L192p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L193p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L194	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L1940p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L200p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L201p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L2060	45K5296	57Y4393	45J7915				73P2582	45K1620	57Y4303	55Y9258	57Y4352
✖ L215	45K5296	57Y4393	45J7915			45K1263	73P2582	45K1620		55Y9258	
✖ L215p	45K5296	57Y4393				45K1263	73P2582	45K1620		55Y9258	
✖ L220x	45K5296	57Y4393					73P2582	45K1620		55Y9258	
✖ L2230x	45K5296	57Y4393				45K1263	73P2582	45K1620	57Y4303	55Y9258	57Y4352
✖ L2240p	45K5296	57Y4393	45J7915				73P2582	45K1620		55Y9258	
✖ L2440x	45K5296	57Y4393	45J7915			45K1263	73P2582	45K1620		55Y9258	

✖ Monitors withdrawn from marketing.

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

 Other accessories at www.lenovo.com/accessories

 Accessories Guide pdf at www.lenovo.com/accessoriesguide

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

¹ **ISO-compliant:** Compliance with ISO 9241 Part 3, ISO Part 7, ISO Part 8, and/or ISO 13406 Part 2 is dependent on a complete ISO-capable platform of a system unit, monitor, video subsystem, operating system and fonts.

² **VESA:** Requires attachment to suitably configured system with similarly enabled operating system.

³ **ENERGY STAR:** As an ENERGY STAR partner, Lenovo has determined that this product meets the ENERGY STAR 4.0 or 4.1 guidelines for energy efficiency. Requires attachment to suitably configured system.

⁴ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

⁵ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.

⁶ **Lenovo pays all shipping costs** for warranty repairs during limited warranty period.

⁷ **ThinkPlus and Lenovo Care Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See terms and conditions for complete details and restrictions.

⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. In the United States call 1-800-426-7378. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For machines with EasyServ or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.

¹⁰ **TAA:** Monitor is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.

¹¹ **Post-warranty annual maintenance agreement:** Service begins at the end of the base warranty or the end of any other applied warranty and maintenance option, whichever occurs last. Service delivery is not available the same day the maintenance agreement is purchased. Maintenance agreements must be purchased and the registration successfully completed prior to the service being available.

¹² **Halogen:** Less than 900 Parts Per Million. Low halogen is defined in accordance with IPC-401B and draft IPC-J-STD 709 Class 1 requirements.

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IdeaPad Tablet A1
SIM card slot only on WWAN models



IdeaPad Tablet A1
SIM card slot only on WWAN models



IdeaPad Tablet A1
White and Blue



IdeaPad Tablet K1
Black



IdeaPad Tablet A1
Black



IdeaPad Tablet A1

IdeaPad™ Tablet A1 (2228) - web only models

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Cores	Memory	Widescreen display	Camera Front/rear (Megapixel)	Graphics	Storage	WiFi 802.11	Back color	Blue-tooth	Battery	GPS	WWAN	OS preload
2228-2PU	Cortex-A8	1.00	Single	512MB	7.0" LED	0.3M/3.0M	PowerVR SGX530	16G ⁸	11b/g/n ²⁸	Pink	BT2.1	1-cell	GPS	None	Android 2.3
2228-2LU	Cortex-A8	1.00	Single	512MB	7.0" LED	0.3M/3.0M	PowerVR SGX530	16G	11b/g/n	White	BT2.1	1-cell	GPS	None	Android 2.3
2228-2KU	Cortex-A8	1.00	Single	512MB	7.0" LED	0.3M/3.0M	PowerVR SGX530	2G	11b/g/n	Black	BT2.1	1-cell	GPS	None	Android 2.3
2228-2NU	Cortex-A8	1.00	Single	512MB	7.0" LED	0.3M/3.0M	PowerVR SGX530	16G	11b/g/n	Blue	BT2.1	1-cell	GPS	None	Android 2.3
2228-2MU	Cortex-A8	1.00	Single	512MB	7.0" LED	0.3M/3.0M	PowerVR SGX530	16G	11b/g/n	Black	BT2.1	1-cell	GPS	None	Android 2.3

- **7.0" Touchscreen tablet with multi-touch**
- **Ultraportable; just 11.95mm thin and less than 400g weight (vary by configuration), in four attractive colors**
- **The magnesium alloy Roll-Cage internal frame protects the hard drive and other critical system components**
- **Supports the latest Flash 10.2 providing better web surfing and video experience**
- **Lenovo App Shop and Android Market ensure ready access to thousands of useful apps**
- **Award-winning Lenovo Care Services to keep you on-line and on-the-go**

Positioning	Touchscreen tablet	<div>Preloaded operating system²⁰</div> <div>- Android™ 2.3 (Gingerbread)</div> <div>Preloaded applications¹⁴ (only some listed)</div> <div><ul style="list-style-type: none">• Lenovo App Shop• Lucky Launcher• GoTouch• Documents To Go• NavDroid• Kindle• mSpot• eBuddy Messenger• ES File manager</div>
Processor	ARM® Cortex™-A8 processor (1.0 GHz, single-core), 256KB L2 cache	
Memory	512MB std / 512MB max ⁷ / 200MHz LPDDR, mobile DDR memory, single-channel capable, no sockets	
Storage	2GB or 16GB / eMMC (embedded Multi Media Card) NAND flash memory on board	
Storage extension	one microSD Card slot	
Graphics	PowerVR SGX530 graphics integrated in TI OMAP3622, provides dedicated 2D/3D graphics hardware accelerator, uses system memory, OpenGL ES 2.0	
Display	7.0" (177.8mm) WSVGA (1024x600) TFT color, Twisted nematic (TN) technology, VibrantView (glossy), LED backlight, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170 pixels per inch (ppi)	
Multi-touch	Multi-touch, supports 2-point	
Camera	Front camera: 0.3-megapixel, fixed focus Rear camera: 3.0-megapixel, fixed focus	
Video capture	480p video capture (rear camera)	
Audio support	High Definition (HD) Audio, Texas Instruments™ (TI™) TLV320AIC3110 codec / mono speaker (1 watt x 1) / analog microphone	
Media capable	Audio formats: MP3, WAV, Ogg Video formats: MP4, 3GP, AVI, RMVB	
Keyboard	Virtual keyboard via Android, portrait and landscape support	
Control buttons	Menu, home, back, volume up, volume down, and power buttons, G-sensor lock (rotation on/off switch)	
Light sensor	Ambient Light Sensor	
G-sensor	Accelerometer (G) sensor, supports 3-axis accelerometer	
Gyroscope	None	
eCompass	None	
Platform	Texas Instruments (TI) OMAP™3622	
Ports	Micro-USB (charger port), stereo microphone input / headphone combo jack (3.5 mm)	
WLAN	11b/g/n wireless ⁴ , Broadcom® BCM4329, WIFI+Bluetooth Combo Chip	<div>Limited Warranty¹²</div> <div>⇨ 1-year Mail-in repair service for covered HW repairs only</div> <div>⇨ Available Warranty Extension:</div> <div><ul style="list-style-type: none">• 2-year Mail-in repair service, 2-year (total duration) warranty extension 04W8188</div> <div>⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686</div> <div>⇨ Award-winning local support, visit http://consumersupport.lenovo.com/us/en/supportphonenumberlist/supportphone.html</div>
WWAN	None	
SIM card	None	
GPS	GPS, Broadcom BCM4751	
Bluetooth®	Bluetooth 2.1+EDR wireless, integrated in Broadcom BCM4329 combo chip	
Dimensions ³	(WxDxH): 7.7" x 4.9" x 0.47"; 195mm x 125mm x 11.95mm	
Weight ²	WLAN model: less than 0.88 lb (400 g)	
Case color	Top: Black frame; Bottom: White (high gloss), black (high gloss), pink (high gloss), and blue (high gloss) with Aluminum look frame	
Case material	Top: Glass cover; Bottom: PC/ABS Magnesium alloy Roll-Cage internal frame	
Battery - type	Lithium Ion, 1-cell (3550mAh)	
Battery - life ¹⁰	up to approximately 7 hr (web browsing via WiFi)	

See footnotes for important warranty information
US models announced November 2, 2011

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IdeaPad Tablet K1



IdeaPad Tablet K1
Black (leather like)



IdeaPad Tablet K1
White (high glossy)



IdeaPad Tablet K1
Black (leather like)



IdeaPad Tablet K1
Red (high glossy)



IdeaPad Tablet K1

Type-model	Processor	GHz	Cores	Memory	Widescreen display	Camera Front/rear (Megapixel)	Graphics	Storage	WiFi 802.11	Back color	Blue-tooth	Battery	GPS	WWAN	OS preload
1304-25U	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	32G ⁸	11b/g/n ²⁸	White/Silver	BT2.1	2-cell	GPS	None	Android 3.1
1304-22U	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	32G	11b/g/n	Black/Gray	BT2.1	2-cell	GPS	None	Android 3.1

- **10.1" Touchscreen tablet with multi-touch**
- **Ultraportable; just 13.3mm thin and 740g weight (vary by configuration), with aluminum rear-casing in multiple attractive colors**
- **Preload Adobe Flash player 10.2, full support for Flash content**
- **1080p playback via micro HDMI port**
- **Lenovo SocialTouch to manage all your social networking engagements on a single easy-to-use interface**
- **The latest Digital Rights Management allows users to download and record the latest movies**
- **Lenovo App Shop and Android Market ensure ready access to thousands of useful apps**
- **Award-winning Lenovo Care Services to keep you on-line and on-the-go**

Positioning	Touchscreen tablet		Preloaded operating system ²⁰ - Android™ 3.1 (HoneyComb) Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo App Shop• Lenovo SocialTouch• Norton™ Mobile Security (Beta)• Adobe® Flash player 10.2• ArcSoft® PowerMobia® Video Player• ArcSoft PowerMobia Video Editor*• ArcSoft PowerMobia Music Player• ArcSoft PowerMobia Photo Workshop*• ArcSoft PhotoStudio Paint*• ArcSoft PowerMobia Media Gallery• ArcSoft PowerMobia eBook Reader and Bookshelf• Arcsoft Cloud• Slacker Radio• Amazon mp3• Kindle• eBuddy Messenger• PokeTALK Tablet Version• ooVoo™ Video Chat• Talking Tom Cat• Angry Birds• Need for Speed™: Shift• Galaxy on Fire 2™ * Trial version, full version available on Lenovo App Shop
Processor	Dual-core ARM Cortex™-A9 processor (1.0 GHz per core, dual-core), 1MB L2 cache		
Memory	1GB std / 1GB max ⁷ / 600MHz LPDDR2 , mobile memory, single-channel capable, no sockets		
Storage	32GB / eMMC (embedded Multi Media Card) flash memory on board		
Storage extension	one microSD Card slot		
Graphics	NVIDIA® ULP (Ultra-low power) GeForce GPU , integrated in Tegra™ 2, uses system memory, OpenGL ES 2.0, supports 1080p video out via micro HDMI connector, HDCP-compliant		
Display	10.1" (256.5mm) HD (WXGA 1280x800) TFT color, VA (Vertical Alignment) technology, VibrantView (glossy), LED backlight , 350 nits, 16:10 aspect ratio, 1500:1 contrast ratio, 149 pixels per inch (ppi)		
Multi-touch	Multi-touch, supports 10-point		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 5.0-megapixel with LED flash, auto focus, digital zoom		
Video capture	720p video capture (rear camera)		
Audio support	High Definition (HD) Audio, Wolfson WM8903LGEFK/RV codec / stereo speakers (1.5 watt x 2) / digital microphone		
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA, WMA2 Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid		
Keyboard	Virtual keyboard via Android, portrait and landscape support		
Control buttons	OFN (Optical Finger Navigation), volume up, volume down, and power buttons, G-sensor lock (rotation on/off)		
Light sensor	Ambient Light Sensor		
G-sensor	Accelerometer (G) sensor, supports 3-axis accelerometer		
Gyroscope	3-axis gyroscope		
eCompass	Digital compass		
Platform	NVIDIA Tegra 2		
Ports	Docking/charger port, micro HDMI, stereo microphone / headphone combo jack (3.5 mm)		
WLAN	11b/g/n wireless ⁴ , Azurewave AW-NH611 SiP module, WIFI+Bluetooth Combo Chip		
WWAN	None		
SIM card	None		
GPS	GPS, Broadcom BCM4751, A-GPS (Assisted GPS) support on WWAN models		
Bluetooth®	Bluetooth 2.1+EDR wireless, integrated in Azurewave AW-NH611 combo chip		
Dimensions ³	(WxDxH): 10.4" x 7.4" x 0.52"; 264mm x 189mm x 13.3mm		
Weight ²	<i>WLAN model:</i> starting at 1.63 lb (740 g); <i>WWAN models:</i> 1.70 lb (770 g)		
Case color	<i>Top:</i> Black frame; <i>Bottom:</i> White (High gloss) with Aluminum frame, red (High gloss) with Aluminum frame, or black (leather like) bottom with dark Aluminum frame		
Case material	<i>Top:</i> Glass cover; <i>Bottom:</i> PC/ABS + Aluminum		
Battery - type	Lithium Ion, 2-cell (7400mAh)		
Battery - life ¹⁰	up to approximately 9 hr (web browsing via WiFi)		
18-watt AC adapter RoHS-compliant			
Limited Warranty ¹² ➤ 1-year Mail-in repair service for covered HW repairs only ➤ Available Warranty Extension: <ul style="list-style-type: none">• 2-year Mail-in repair service, 2-year (total duration) warranty extension 04W8188 ➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686 ➤ Award-winning local support, visit http://consumersupport.lenovo.com/us/en/supportphonenumber/supportphone.html			

See footnotes for important warranty information
 US models announced July 20, 2011

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Limited Warranty¹²

- **1-year Mail-in repair service for covered HW repairs only**
- **Available Warranty Extension:**
 - 2-year Mail-in repair service, 2-year (total duration) warranty extension **04W8188**
- **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**
- **Award-winning local support, visit <http://consumersupport.lenovo.com/us/en/supportphonenumberlist/supportphone.html>**

IdeaPad™ Tablet K1 (1304) - web only models

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Cores	Memory	Widescreen display	Camera Front/rear (Megapixel)	Graphics	Storage	WiFi 802.11	Back color	Bluetooth	Battery	GPS	WWAN	OS preload
1304-2HU	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	16G ⁸	11b/g/n ²⁸	White/Silver	BT2.1	2-cell	GPS	None	Android 3.1
1304-2LU	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	32G	11b/g/n	White/Silver	BT2.1	2-cell	GPS	None	Android 3.1
1304-2FU	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	16G	11b/g/n	Black/Gray	BT2.1	2-cell	GPS	None	Android 3.1
1304-2DU	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	32G	11b/g/n	Black/Gray	BT2.1	2-cell	GPS	None	Android 3.1
1304-2WU	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	16G	11b/g/n	Red/Silver	BT2.1	2-cell	GPS	None	Android 3.1
1304-2QU	Cortex-A9	1.00	Dual	1GB	10.1" HD LED	2.0M/5.0M	ULP GeForce	32G	11b/g/n	Red/Silver	BT2.1	2-cell	GPS	None	Android 3.1

- **10.1" Touchscreen tablet with multi-touch**
- **Ultraportable; just 13.3mm thin and 740g weight (vary by configuration), with aluminum rear-casing in multiple attractive colors**
- **Preload Adobe Flash player 10.2, full support for Flash content**
- **1080p playback via micro HDMI port**
- **Lenovo SocialTouch to manage all your social networking engagements on a single easy-to-use interface**
- **The latest Digital Rights Management allows users to download and record the latest movies**
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Positioning	Touchscreen tablet		Preloaded operating system ²⁰ - Android™ 3.1 (HoneyComb) Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo App Shop• Lenovo SocialTouch• Norton™ Mobile Security (Beta)• Adobe® Flash player 10.2• ArcSoft® PowerMobia® Video Player• ArcSoft PowerMobia Video Editor*• ArcSoft PowerMobia Music Player• ArcSoft PowerMobia Photo Workshop*• ArcSoft PhotoStudio Paint*• ArcSoft PowerMobia Media Gallery• ArcSoft PowerMobia eBook Reader and Bookshelf• Arcsoft Cloud• Slacker Radio• Amazon mp3• Kindle• eBuddy Messenger• PokeTALK Tablet Version• ooVoo™ Video Chat• Talking Tom Cat• Angry Birds• Need for Speed™: Shift• Galaxy on Fire 2™ * Trial version, full version available on Lenovo App Shop
Processor	Dual-core ARM Cortex™-A9 processor (1.0 GHz per core, dual-core), 1MB L2 cache		
Memory	1GB std / 1GB max ⁷ / 600MHz LPDDR2 , mobile memory, single-channel capable, no sockets		
Storage	16GB or 32GB / eMMC (embedded Multi Media Card) flash memory on board		
Storage extension	one microSD Card slot		
Graphics	NVIDIA® ULP (Ultra-low power) GeForce GPU , integrated in Tegra™ 2, uses system memory, OpenGL ES 2.0, supports 1080p video out via micro HDMI connector, HDCP-compliant		
Display	10.1" (256.5mm) HD (WXGA 1280x800) TFT color, VA (Vertical Alignment) technology, VibrantView (glossy), LED backlight , 350 nits, 16:10 aspect ratio, 1500:1 contrast ratio, 149 pixels per inch (ppi)		
Multi-touch	Multi-touch, supports 10-point		
Camera	<i>Front camera:</i> 2.0-megapixel, fixed focus <i>Rear camera:</i> 5.0-megapixel with LED flash, auto focus, digital zoom		
Video capture	720p video capture (rear camera)		
Audio support	High Definition (HD) Audio, Wolfson WM8903LGEFK/RV codec / stereo speakers (1.5 watt x 2) / digital microphone		
Media capable	Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA, WMA2 Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid		
Keyboard	Virtual keyboard via Android, portrait and landscape support		
Control buttons	OFN (Optical Finger Navigation), volume up, volume down, and power buttons, G-sensor lock (rotation on/off)		
Light sensor	Ambient Light Sensor		
G-sensor	Accelerometer (G) sensor, supports 3-axis accelerometer		
Gyroscope	3-axis gyroscope		
eCompass	Digital compass		
Platform	NVIDIA Tegra 2		
Ports	Docking/charger port, micro HDMI, stereo microphone / headphone combo jack (3.5 mm)		
WLAN	11b/g/n wireless ⁴ , Azurewave AW-NH611 SiP module, WIFI+Bluetooth Combo Chip		
WWAN	None		
SIM card	None		
GPS	GPS, Broadcom BCM4751, A-GPS (Assisted GPS) support on WWAN models		
Bluetooth®	Bluetooth 2.1+EDR wireless, integrated in Azurewave AW-NH611 combo chip		
Dimensions ³	(WxDxH): 10.4" x 7.4" x 0.52"; 264mm x 189mm x 13.3mm		
Weight ²	<i>WLAN model:</i> starting at 1.63 lb (740 g); <i>WWAN models:</i> 1.70 lb (770 g)		
Case color	<i>Top:</i> Black frame; <i>Bottom:</i> White (high gloss) with Aluminum frame, red (high gloss) with Aluminum frame, or black (leather like) bottom with dark Aluminum frame		
Case material	<i>Top:</i> Glass cover; <i>Bottom:</i> PC/ABS + Aluminum		
Battery - type	Lithium Ion, 2-cell (7400mAh)		
Battery - life ¹⁰	up to approximately 9 hr (web browsing via WiFi)		
18-watt AC adapter RoHS-compliant			
Limited Warranty ¹² ➤ 1-year Mail-in repair service for covered HW repairs only ➤ Available Warranty Extension: <ul style="list-style-type: none">• 2-year Mail-in repair service, 2-year (total duration) warranty extension 04W8188 ➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686 ➤ Award-winning local support, visit http://consumersupport.lenovo.com/us/en/supportphonenumber/supportphone.html			

See footnotes for important warranty information
 US models announced July 20, 2011

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 (FERR1-1) July 2011

Limited Warranty¹²

- **1-year Mail-in repair service for covered HW repairs only**
- **Available Warranty Extension:**
 - **2-year Mail-in repair service, 2-year (total duration) warranty extension 04W8188**
- **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**
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IdeaPad Tablet K1 Keyboard Dock (78Y7333)



IdeaPad Tablet K1 Charger Dock (78Y7330)



IdeaPad Tablet K1 18W AC Adapter (78Y7365)



Lenovo Headset P180 (57Y6747)



IdeaPad Tablet K1 Cover



IdeaPad Tablet K1 Sleeve (57Y6750)



IdeaPad Tablet K1 Case (Black) - 78Y7390
IdeaPad Tablet K1 Case (Red) - 78Y7391



IdeaPad Tablet K1 Film (Mist Transparency) - 78Y7322
IdeaPad Tablet K1 Film (High Transparency) - 78Y7323

**Partial list of accessories supported on:
IdeaPad Tablet K1****Expansion**

IdeaPad Tablet K1 Charger Dock (Black)	78Y7330
IdeaPad Tablet K1 Keyboard Dock (Black)	78Y7333

Multimedia

Lenovo Headset P180	57Y6747
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Adapters

IdeaPad Tablet K1 18W AC Adapter	78Y7365
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Carrying Cases

IdeaPad Tablet K1 Sleeve (Black)	57Y6750
IdeaPad Tablet K1 Case (Black)	78Y7390
IdeaPad Tablet K1 Case (Red)	78Y7391

Covers

IdeaPad Tablet K1 Cover (White)	78Y7394
IdeaPad Tablet K1 Cover (Gray)	78Y7395
IdeaPad Tablet K1 Cover (Blue)	78Y7283
IdeaPad Tablet K1 Cover (Orange)	78Y7284
IdeaPad Tablet K1 Cover (Pink)	78Y7285

Screen protection film

IdeaPad Tablet K1 Film (Mist Transparency)	78Y7322
IdeaPad Tablet K1 Film (High Transparency)	78Y7323

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

Type-model	Processor	GHz	Memory	Widescreen display	Camera	Integrated graphics	SATA disk	PCIe Mini card 802.11	PCIe Mini card WWAN	Top color	Bluetooth	Battery	Win7 preload	Avail date
0647-32U	Atom N450	1.66	1GB	10.1" WSVGA	1.3M	GMA 3150	160GB ⁸	11b/g/n ²⁸		Red		6-cell	Starter	Jan 10
0647-33U	Atom N450	1.66	1GB	10.1" WSVGA	1.3M	GMA 3150	160GB	11b/g/n		Black		6-cell	Starter	Jan 10
0647-23U	Atom N450	1.66	1GB	10.1" WSVGA	1.3M	GMA 3150	160GB	11b/g/n	Gobi2000	Black	Bluetooth	6-cell	Starter	Jan 10
0647-37U	Atom N450	1.66	1GB	10.1" WSVGA	1.3M	GMA 3150	250GB	11b/g/n		Red		6-cell	Starter	Oct 10
0647-39U	Atom N450	1.66	1GB	10.1" WSVGA	1.3M	GMA 3150	250GB	11b/g/n		Red	Bluetooth	6-cell	Starter	Dec 10

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- **10.1" widescreen, glossy display with LED backlight**
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- **Integrated camera and Lenovo's VeriFace™ face recognition software helps control access to your notebook by recognizing your face**
- **OneKey™ Rescue System includes OneKey Recovery with press of recovery key**
- **Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Netbook; consumer markets Intel® Atom™ Processor N450 with single-core, DMI (Direct Media Interface), integrated DDR2 memory controller (up to 667MHz) Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Starter Edition Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Quick Start• Lenovo MapLife• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	1GB std / 2GB max / PC2-5300 667MHz DDR2 , non-parity, single-channel, one 200-pin SO-DIMM socket; <i>Non-italics</i> : standard memory 1GB in socket; no socket available		
Optical drive	None		
SATA disk	160GB (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™		
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 180 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor, external monitor support via analog VGA DB-15 connector		
Keyboard	Full size keyboard, Fn keys, recovery key, Quick Start button		
Touch pad	One-piece touch pad with two button function		
Dimensions ³	<i>3-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.2"; 268mm x 168mm x 16-30.95mm <i>6-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.5"; 268mm x 168mm x 16-37.45mm		
Weight ²	<i>3-cell:</i> starting at 2.43 lb (1.1 kg) <i>6-cell:</i> starting at 2.76 lb (1.25 kg)		
Case color	<i>Top:</i> black or red, with pattern <i>bottom:</i> black <i>Palm rest:</i> Gray		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion, 6-cell		
Battery - life ¹⁰	<i>3-cell:</i> up to 3.5 hr; <i>6-cell:</i> up to 7.0 hr		
Chipset	Intel NM10 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Two PCI Express Mini Card slots		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip		
Gobi™ 2000	<i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider		
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, LED indicator		
Modem	None		
Ethernet	10/100 ethernet, RealTek® RTL8103EL		
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / dual array microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certificated		
Security	Power-on password, supervisor password, hard disk password		
Fingerprint reader	None		

Limited Warranty ¹²		
⇨	1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter	
⇨	Mail In repair service	
⇨	Service upgrade options (in eligible locations): ⁹	
	• 2-year Mail-In warranty	78Y1544
	• 3-year Mail-In warranty	78Y1547
	• 1-year accidental damage protection via Mail-In	78Y1543
	• 2-year accidental damage protection via Mail-In	78Y1545
	• 3-year accidental damage protection via Mail-In	78Y1548
⇨	24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	

See footnotes for important warranty information

US model announced December 1, 2010; previous models on January 18 or October 20, 2010

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(MRA3-1) December 2010

Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	PCIe Mini card 802.11	PCIe Mini card WWAN	Top color	Bluetooth	Battery	Win7 preload	Avail date
0647-29U	Atom N450	1.66	1GB	10.1" WSVGA	0.3M	GMA 3150	250GB ⁸	11b/g/n ²⁸	None	Black	None	6-cell	Starter	Jan 10

- **Lenovo's netbook: smaller and lighter than a notebook**
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- **OneKey™ Rescue System includes OneKey Recovery with press of recovery key**
- **Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Netbook; consumer markets Intel® Atom™ Processor N450 with single-core, DMI (Direct Media Interface), integrated DDR2 memory controller (up to 667MHz) Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Starter Edition Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Quick Start• Lenovo MapLife• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	1GB std / 2GB max / PC2-5300 667MHz DDR2 , non-parity, single-channel, one 200-pin SO-DIMM socket; <i>Non-italics:</i> standard memory 1GB in socket; no socket available		
Optical drive	None		
SATA disk	250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™		
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 180 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor, external monitor support via analog VGA DB-15 connector		
Keyboard	Full size keyboard, Fn keys, recovery key, Quick Start button		
Touch pad	One-piece touch pad with two button function		
Dimensions ³	<i>3-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.2"; 268mm x 168mm x 16-30.95mm <i>6-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.5"; 268mm x 168mm x 16-37.45mm		30-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	<i>3-cell:</i> starting at 2.43 lb (1.1 kg) <i>6-cell:</i> starting at 2.76 lb (1.25 kg)		
Case color	<i>Top:</i> black, with pattern <i>bottom:</i> black <i>Palm rest:</i> Gray		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion, 6-cell		
Battery - life ¹⁰	<i>3-cell:</i> up to 3.5 hr; <i>6-cell:</i> up to 7.0 hr		
Chipset	Intel NM10 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Two PCI Express Mini Card slots		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip		
WWAN	None		
Bluetooth™	None		
Modem	None		
Ethernet	10/100 ethernet, RealTek® RTL8103EL		
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / dual array microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certificated		
Security	Power-on password, supervisor password, hard disk password		
Fingerprint reader	None		

Limited Warranty ¹²	
➤ 1-year warranty*:	
* 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter	
➤ Mail In repair service	
➤ Service upgrade options (in eligible locations): ⁹	
• 2-year Mail-In warranty	78Y1544
• 3-year Mail-In warranty	78Y1547
• 1-year accidental damage protection via Mail-In	78Y1543
• 2-year accidental damage protection via Mail-In	78Y1545
• 3-year accidental damage protection via Mail-In	78Y1548
➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	

See footnotes for important warranty information
 US model announced January 18, 2010

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 (MRA3-2) June 2010

Type-model	Processor	GHz	Memory	Widescreen display	Camera	Integrated graphics	SATA disk	PCIe Mini card 802.11	PCIe Mini card WWAN	Top color	Bluetooth	Battery	Win7 preload	Avail date
0647-2AU	Atom N455	1.66	1GB	10.1" WSVGA	0.3M	GMA 3150	160GB ⁸	11b/g/n ²⁸		Black		6-cell	Starter	Jul 10
0647-2BU	Atom N455	1.66	1GB	10.1" WSVGA	0.3M	GMA 3150	250GB	11b/g/n		Black	Bluetooth	6-cell	Starter	Jul 10
0647-2EU	Atom N455	1.66	1GB	10.1" WSVGA	0.3M	GMA 3150	160GB	11b/g/n	Gobi2000	Black		6-cell	Starter	Jul 10

- *Lenovo's netbook: smaller and lighter than a notebook*
- *10.1" widescreen, glossy display with LED backlight*
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- *Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows*
- *These system are Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	Netbook; consumer markets Intel® Atom™ Processor N455 with single-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 667MHz) Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Starter Edition	
Memory	1GB std / 2GB max / PC3-10600 1333MHz DDR3* , non-parity, single-channel, one 204-pin SO-DIMM socket; <i>Non-italics:</i> standard memory 1GB in socket; no socket available * System automatically clocks down for processors with 667MHz DDR3 memory controller		Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Quick Start• Lenovo MapLife• Microsoft Office 2010 preloaded; purchase product key to activate	
Optical drive	None		 30-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant	
SATA disk	160GB (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™			
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 180 nits, 16:9 aspect ratio, 400:1 contrast ratio			
Camera	Camera on top of screen, 0.3-megapixel, fixed focus			
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor, external monitor support via analog VGA DB-15 connector			
Keyboard	Full size keyboard, Fn keys, recovery key, Quick Start button		Limited Warranty ¹² ⇨ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Mail-In warranty 78Y1544• 3-year Mail-In warranty 78Y1547• 1-year accidental damage protection via Mail-In 78Y1543• 2-year accidental damage protection via Mail-In 78Y1545• 3-year accidental damage protection via Mail-In 78Y1548 ⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
Touch pad	One-piece touch pad with two button function			
Dimensions ³	<i>3-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.2"; 268mm x 168mm x 16-30.95mm <i>6-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.5"; 268mm x 168mm x 16-37.45mm			
Weight ²	<i>3-cell:</i> starting at 2.43 lb (1.1 kg) <i>6-cell:</i> starting at 2.76 lb (1.25 kg)			
Case color	<i>Top:</i> black; <i>bottom:</i> black <i>Palm rest:</i> Gray			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion, 6-cell			
Battery - life ¹⁰	<i>3-cell:</i> up to 3.5 hr; <i>6-cell:</i> up to 7.0 hr			
Chipset	Intel NM10 Express Chipset			
ExpressCard/34	None			
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)			
Ports	Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	Two PCI Express Mini Card slots			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip			
Gobi™ 2000	<i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider			
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless, internal USB 2.0 interface			
Modem	None			
Ethernet	10/100 ethernet, RealTek® RTL8103EL			
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / dual array microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certified			
Security	Power-on password, supervisor password, hard disk password			
Fingerprint reader	None			

See footnotes for important warranty information
US models announced July 7, 2010

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Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	PCIe Mini card 802.11	PCIe Mini card WWAN	Top color	Bluetooth	Battery	Win7 preload	Avail date
0647-35U	Atom N455	1.66	1GBx1	10.1" WSVGA	0.3M	GMA 3150	250GB ⁸	11b/g/n ²⁸	None	Black	None	6-cell	Starter	Aug 10
0647-38U	Atom N455	1.66	1GBx1	10.1" WSVGA	0.3M	GMA 3150	250GB	11b/g/n	None	Black	Bluetooth	6-cell	Starter	Dec 10

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Positioning Processor	Netbook; consumer markets Intel® Atom™ Processor N455 with single-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 667MHz) Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Starter Edition	
Memory	1GB std / 2GB max / PC3-10600 1333MHz DDR3* , non-parity, single-channel, one 204-pin SO-DIMM socket; <i>Non-italics:</i> standard memory 1GB in socket; no socket available * System automatically clocks down for processors with 667MHz DDR3 memory controller		Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Quick Start• Lenovo MapLife• Microsoft Office 2010 preloaded; purchase product key to activate	
Optical drive	None			
SATA disk	250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™			
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 180 nits, 16:9 aspect ratio, 400:1 contrast ratio			
Camera	Camera on top of screen, 0.3-megapixel, fixed focus			
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor, external monitor support via analog VGA DB-15 connector			
Keyboard	Full size keyboard, Fn keys, recovery key, Quick Start button			
Touch pad	One-piece touch pad with two button function			
Dimensions ³	<i>3-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.2"; 268mm x 168mm x 16-30.95mm <i>6-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.5"; 268mm x 168mm x 16-37.45mm		30-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant	
Weight ²	<i>3-cell:</i> starting at 2.43 lb (1.1 kg) <i>6-cell:</i> starting at 2.76 lb (1.25 kg)			
Case color	<i>Top:</i> black; <i>bottom:</i> black <i>Palm rest:</i> Gray			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		Limited Warranty ¹² ⇒ 1-year warranty* : * 1-year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇒ Mail In repair service ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Mail-In warranty 78Y1544• 3-year Mail-In warranty 78Y1547• 1-year accidental damage protection via Mail-In 78Y1543• 2-year accidental damage protection via Mail-In 78Y1545• 3-year accidental damage protection via Mail-In 78Y1548 ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
Battery - type	Lithium Ion, 6-cell			
Battery - life ¹⁰	<i>3-cell:</i> up to 3.5 hr; <i>6-cell:</i> up to 7.0 hr			
Chipset	Intel NM10 Express Chipset			
ExpressCard/34	None			
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)			
Ports	Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	Two PCI Express Mini Card slots			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip			
WWAN	None			
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, LED indicator			
Modem	None			
Ethernet	10/100 ethernet, RealTek® RTL8103EL			
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / dual array microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certified			
Security	Power-on password, supervisor password, hard disk password			
Fingerprint reader	None			

See footnotes for important warranty information

US model announced December 1, 2010; previous models on August 4, 2010

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ideapad



Lenovo IdeaPad S10-3s
White



Lenovo IdeaPad S10-3s
White



Lenovo IdeaPad S10-3s
White



Lenovo IdeaPad S10-3s
White



Lenovo IdeaPad S10-3s
White



Lenovo IdeaPad S10-3s
White

Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Top color	Bluetooth	Battery	Win7 preload	Avail date
0703-22U	Atom N450	1.66	1GB	10.1" WSVGA	1.3M	GMA 3150	160GB ⁸	11b/g/n ²⁸	None	White	Bluetooth	6-cell	Starter	Apr 10

- **Lenovo's netbook: smaller and lighter than a notebook**
- **10.1" widescreen, glossy display with LED backlight**
- **Super-slim (starts at 0.6 inch thin)**
- **Integrated camera and Lenovo's VeriFace™ face recognition software helps control access to your notebook by recognizing your face**
- **OneKey™ Rescue System includes OneKey Recovery with press of recovery key**
- **Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Netbook; consumer markets Intel® Atom™ Processor N450 with single-core, DMI (Direct Media Interface), integrated DDR2 memory controller (up to 667MHz) Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Starter Edition Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Quick Start• Lenovo MapLife• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	1GB std / 2GB max ⁷ / PC2-5300 667MHz DDR2 , non-parity, single-channel, one 200-pin SO-DIMM socket; <i>Non-italics</i> : standard memory 1GB in socket; no socket available		
Optical drive	None		
SATA disk	160GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™		
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor, external monitor support via analog VGA DB-15 connector		
Keyboard	Full size keyboard, Fn keys, recovery key, Quick Start button		
Touch pad	One-piece touch pad with two button function		
Dimensions ³	<i>3-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.1"; 270mm x 168mm x 16-28.5mm <i>6-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.4"; 270mm x 168mm x 16-34.3mm		30-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	<i>3-cell:</i> starting at 2.43 lb (1.1 kg) <i>6-cell:</i> starting at 2.76 lb (1.25 kg)		
Case color	<i>Top:</i> white <i>bottom:</i> white <i>Palm rest:</i> white		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion, 6-cell		
Battery - life ¹⁰	<i>3-cell:</i> up to 3.5 hr; <i>6-cell:</i> up to 7.0 hr		
Chipset	Intel NM10 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Two PCI Express Mini Card slots		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip		
WWAN	None		
Bluetooth™	Bluetooth 2.1 wireless + EDR, LED indicator		
Modem	None		
Ethernet	10/100 ethernet, Broadcom BCM57790		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 W x 2) / dual array microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certificated		
Security	Administrator password, hard disk password		
Fingerprint reader	None		
			Limited Warranty ¹² ➤ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ➤ Mail In repair service ➤ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Mail-In warranty 78Y1544• 3-year Mail-In warranty 78Y1547• 1-year accidental damage protection via Mail-In 78Y1543• 2-year accidental damage protection via Mail-In 78Y1545• 3-year accidental damage protection via Mail-In 78Y1548 ➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686

See footnotes for important warranty information
US model announced April 28, 2010

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Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Top color	Bluetooth	Battery	Win7 preload	Avail date
0703-32U	Atom N450	1.66	1GB	10.1" WSVGA	1.3M	GMA 3150	160GB ⁸	11b/g/n ²⁸	None	White	Bluetooth	3-cell	Starter	Apr 10

- **Lenovo's netbook: smaller and lighter than a notebook**
- **10.1" widescreen, glossy display with LED backlight**
- **Super-slim (starts at 0.6 inch thin)**
- **Integrated camera and Lenovo's VeriFace™ face recognition software helps control access to your notebook by recognizing your face**
- **OneKey™ Rescue System includes OneKey Recovery with press of recovery key**
- **Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Netbook; consumer markets Intel® Atom™ Processor N450 with single-core, DMI (Direct Media Interface), integrated DDR2 memory controller (up to 667MHz) Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Starter Edition Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Quick Start• Lenovo MapLife• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	1GB std / 2GB max ⁷ / PC2-5300 667MHz DDR2 , non-parity, single-channel, one 200-pin SO-DIMM socket; <i>Non-italics</i> : standard memory 1GB in socket; no socket available		
Optical drive	None		
SATA disk	160GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™		
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor, external monitor support via analog VGA DB-15 connector		
Keyboard	Full size keyboard, Fn keys, recovery key, Quick Start button		
Touch pad	One-piece touch pad with two button function		
Dimensions ³	<i>3-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.1"; 270mm x 168mm x 16-28.5mm <i>6-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.4"; 270mm x 168mm x 16-34.3mm		30-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	<i>3-cell:</i> starting at 2.43 lb (1.1 kg) <i>6-cell:</i> starting at 2.76 lb (1.25 kg)		
Case color	<i>Top:</i> white <i>bottom:</i> white <i>Palm rest:</i> white		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion, 3-cell		
Battery - life ¹⁰	<i>3-cell:</i> up to 3.5 hr; <i>6-cell:</i> up to 7.0 hr		
Chipset	Intel NM10 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Two PCI Express Mini Card slots		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip		
WWAN	None		
Bluetooth™	Bluetooth 2.1 wireless + EDR, LED indicator		
Modem	None		
Ethernet	10/100 ethernet, Broadcom BCM57790		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 W x 2) / dual array microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certificated		
Security	Administrator password, hard disk password		
Fingerprint reader	None		

Limited Warranty ¹²	
➤ 1-year warranty*:	
* 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter	
➤ Mail In repair service	
➤ Service upgrade options (in eligible locations): ⁹	
• 2-year Mail-In warranty	78Y1544
• 3-year Mail-In warranty	78Y1547
• 1-year accidental damage protection via Mail-In	78Y1543
• 2-year accidental damage protection via Mail-In	78Y1545
• 3-year accidental damage protection via Mail-In	78Y1548
➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	

See footnotes for important warranty information
US model announced April 28, 2010

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ideapad



Lenovo IdeaPad S10-3t



Lenovo IdeaPad S10-3t
(4-cell model with Cosmic Night pattern)



Lenovo IdeaPad S10-3t
(4-cell model)



Lenovo IdeaPad S10-3t
(4-cell model)



Lenovo IdeaPad S10-3t
(4-cell model with Cosmic Wonder pattern)



Lenovo IdeaPad S10-3t
(4-cell model with Cosmic Wonder pattern)

Type-model	Pro- cessor	GHz	Memory	Widescreen display	Multi- touch screen	Cam- era	Integrated graphics	SATA disk	PCIe Mini card 802.11	Top color	Blue- tooth	Battery	Win7 preload	Avail date
0651-4FU	N450	1.66	1GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	160GB ⁸	11b/g/n ²⁸	Cosmic Night		4-cell	Starter	Jan 10
0651-4EU	N450	1.66	1GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	160GB	11b/g/n	Cosmic Wonder		4-cell	Starter	Jan 10
0651-3EU	N470	1.83	2GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	250GB	11b/g/n	Cosmic Night	Blue	4-cell	Prem 32	Jan 10
0651-86U	N450	1.66	1GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	250GB	11b/g/n	Cosmic Night		4-cell	Starter	Aug 10
0651-95U	N470	1.83	2GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	320GB	11b/g/n	Cosmic Wonder	Blue	4-cell	Prem 32	Nov 10
0651-99U	N475	1.83	2GB DDR3	10.1" WSVGA	Multi	1.3M	GMA 3150	320GB	11b/g/n	Cosmic Night	Blue	8-cell	Prem 32	Nov 10
0651-9BU	N455	1.66	2GB DDR3	10.1" WSVGA	Multi	1.3M	GMA 3150	320GB	11b/g/n	Cosmic Night	Blue	4-cell	Prem 32	Feb 11
0651-6DU	N450	1.66	2GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	320GB	11b/g/n	Cosmic Night		4-cell	Pro 32	Mar 11

- **Tablet netbook features a multi-touch panel and a durable steel hinge supporting ± 180 degree rotation**
- **10.1" widescreen, glossy display with LED backlight**
- **Super-slim (starts at 0.6 inch thin)**
- **Integrated camera and Lenovo's VeriFace™ face recognition software helps control access to your notebook by recognizing your face**
- **OneKey™ Rescue System includes OneKey Recovery with press of recovery key**
- **Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Tablet netbook; consumer markets Intel® Atom™ Processor N450 or N470 with single-core, DMI (Direct Media Interface), integrated DDR2 memory controller (up to 667MHz), integrated graphic controller, Hyper-Threading technology, and 512KB L2 cache or Intel Atom Processor N455 or N475 with single-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 667MHz), integrated graphic controller, Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ <ul style="list-style-type: none">- Some: Genuine Windows® 7 Starter Edition- Some: Genuine Windows 7 Home Premium 32- Some: Genuine Windows 7 Professional 32	
Memory	1GB or 2GB std / 2GB max Some: PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, one 200-pin SO-DIMM socket; Some: PC3-10600 1333MHz DDR3* , non-parity, dual-channel capable, one 204-pin SO-DIMM socket; * System automatically clocks down for processors with 667MHz DDR3 memory controller		Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Quick Start• Lenovo VeriTouch• Lenovo Natural Touch• Microsoft® Research AutoCollage Touch (Home Premium only)	
Optical drive	None		30-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant	
SATA disk	160GB (5400 rpm), 250GB (5400 rpm), or 320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™			
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 180 nits, 16:9 aspect ratio, 400:1 contrast ratio, rotatable dual swivel hinge for tablet mode, support display auto roation			
Touch screen type	MultiTouch (touchscreen supports two-finger touch)			
Camera	Camera on top of screen, 1.3-megapixel, fixed focus			
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor External monitor support via analog VGA DB-15 connector			
Keyboard	Full size keyboard, Fn keys		Limited Warranty ¹² ➤ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ➤ Mail In repair service ➤ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Mail-In warranty 78Y1544• 3-year Mail-In warranty 78Y1547• 1-year accidental damage protection via Mail-In 78Y1543• 2-year accidental damage protection via Mail-In 78Y1545• 3-year accidental damage protection via Mail-In 78Y1548 ➤ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
Touch pad	One-piece touch pad with two button function			
Dimensions ³	4-cell: (WxDxH): 11.0" x 6.9" x 0.6-1.1"; 280mm x 174mm x 15-27.6mm 8-cell: (WxDxH): 11.1" x 8.0" x 0.6-1.4"; 282mm x 202mm x 15-35.0mm			
Weight ²	4-cell: starting at 2.76 lb (1.25 kg) 8-cell: starting at 3.31 lb (1.50 kg)			
Case color	Top: black color with different pattern bottom: black Palm rest: White			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion, 4-cell or Hybrid 8-cell			
Battery - life ¹⁰	4-cell: up to 4 hr; 8-cell: up to 10 hr			
Chipset	Intel NM10 Express Chipset			
ExpressCard/34	None			
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)			
Ports	Two USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	Two PCI Express Mini Card slots			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip			
Bluetooth™	Some: Bluetooth 2.1 wireless + EDR, LED indicator			
Modem	None			
Ethernet	Gigabit ethernet, Broadcom 57780			
Audio support	High Definition (HD) Audio, Conexant® CX20582 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certified			
Security	Power-on password, supervisor password, hard disk password, security keyhole			
Fingerprint reader	None			

See footnotes for important warranty information

US model announced August 10, 2011;

previous models on January 18, August 4, or November 3, 2010 or February 16, 2011

Type-model	Pro- cessor	GHz	Memory	Widescreen display	Multi- touch screen	Cam- era	Integrated graphics	SATA disk	PCIe Mini card 802.11	Top color	Blue- tooth	Battery	Win7 preload	Avail date
0651-37U	N450	1.66	1GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	250GB ⁸	11b/g/n ²⁸	Cosmic Night	None	8-cell	Starter	Jan 10
0651-85U	N450	1.66	1GB DDR2	10.1" WSVGA	Multi	1.3M	GMA 3150	250GB	11b/g/n	Cosmic Night	None	4-cell	Prem 32	Aug 10
0651-7HU	N455	1.66	1GB DDR3	10.1" WSVGA	Multi	1.3M	GMA 3150	250GB	11b/g/n	Cosmic Night	None	4-cell	Prem 32	Aug 10

- **Tablet netbook features a multi-touch panel and a durable steel hinge supporting ±180 degree rotation**
- **10.1" widescreen, glossy display with LED backlight**
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- **Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Tablet netbook; consumer markets Intel® Atom™ Processor N450 with single-core, DMI (Direct Media Interface), integrated DDR2 memory controller (up to 667MHz), integrated graphic controller, Hyper-Threading technology, and 512KB L2 cache or Intel Atom Processor N455 with single-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 667MHz), integrated graphic controller, Hyper-Threading Technology, and 512KB L2 cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Starter Edition - Some: Genuine Windows® 7 Home Premium 32 Preloaded applications¹⁴ (only some listed) • Lenovo® OneKey Recovery • McAfee® VirusScan® Plus (60 days of virus definitions) • Lenovo ReadyComm • Lenovo Energy Management Software • Lenovo DirectShare • VeriFace • Quick Start • Lenovo VeriTouch • Lenovo Natural Touch • BumpTop™ • Microsoft® Research AutoCollage Touch (Home Premium only) • Microsoft Office 2010 preloaded; purchase product key to activate				
Memory	1GB std / 2GB max / Some: PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, one 200-pin SO-DIMM socket; Some: PC3-10600 1333MHz DDR3* , non-parity, dual-channel capable, one 204-pin SO-DIMM socket; * System automatically clocks down for processors with 667MHz DDR3 memory controller														
Optical drive	None														
SATA disk	250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, 2.5" platter, not removable, Active Protection System™														
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 180 nits, 16:9 aspect ratio, 400:1 contrast ratio, rotatable dual swivel hinge for tablet mode, support display auto rotation														
Touch screen type	MultiTouch (touchscreen supports two-finger touch)														
Camera	Camera on top of screen, 1.3-megapixel, fixed focus														
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor External monitor support via analog VGA DB-15 connector														
Keyboard	Full size keyboard, Fn keys														
Touch pad	One-piece touch pad with two button function														
Dimensions ³	4-cell: (WxDxH): 11.0" x 6.9" x 0.6-1.1"; 280mm x 174mm x 15-27.6mm 8-cell: (WxDxH): 11.1" x 8.0" x 0.6-1.4"; 282mm x 202mm x 15-35.0mm														
Weight ²	4-cell: starting at 2.76 lb (1.25 kg) 8-cell: starting at 3.31 lb (1.50 kg)														
Case color	Top: black color with different pattern bottom: black Palm rest: White														
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic														
Battery - type	Lithium Ion, 4-cell or Hybrid 8-cell														
Battery - life ¹⁰	4-cell: up to 4 hr; 8-cell: up to 10 hr														
Chipset	Intel NM10 Express Chipset														
ExpressCard/34	None														
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)														
Ports	Two USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)														
TV tuner	None														
PCIe Mini Card	Two PCI Express Mini Card slots														
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Broadcom®, or Atheros chip														
Bluetooth™	None														
Modem	None														
Ethernet	Gigabit ethernet, Broadcom 57780														
Audio support	High Definition (HD) Audio, Conexant® CX20582 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm), Dolby® Headphone™ certified														
Security	Power-on password, supervisor password, hard disk password, security keyhole														
Fingerprint reader	None														

See footnotes for important warranty information

US models announced August 4, 2010; previous models on January 18, 2010

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(CS2-2) August 2010



Lenovo IdeaPad S100
Black



Lenovo IdeaPad S100
Black



Lenovo IdeaPad S100
Black



Lenovo IdeaPad S100
Black



Lenovo IdeaPad S100
Black



Lenovo IdeaPad S100
Black

Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	PCIe Mini card 802.11	PCIe Mini card WWAN	Top color	Bluetooth	Battery	Win7 preload	Avail date
1067-22U	Atom N455	1.66	1GB	10.1" WSVGA	0.3M	GMA 3150	250GB ⁸	11b/g/n ²⁸	None	Black	Bluetooth	6-cell	Starter	Sep 11

- *Lenovo's netbook: smaller and lighter than a notebook*
- *10.1" widescreen, glossy display with LED backlight*
- *Super-slim (starts at 0.6 inch thin)*
- *OneKey™ Rescue System includes OneKey Recovery with press of recovery key*
- *Lenovo® Quick Start: Utility for quick access to Web, music, photos, chat, and Skype™ without booting into Windows*
- *This system is Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	Netbook; consumer markets Intel® Atom™ Processor N455 with single-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 667MHz) Hyper-Threading Technology, and 512KB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Starter Edition Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• Lenovo Energy Management Software• Quick Start• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	1GB std / 2GB max / PC3-10600 1333MHz DDR3* , non-parity, single-channel, one 204-pin SO-DIMM socket; <i>Non-italics</i> : standard memory 1GB in socket; no socket available * System automatically clocks down for processors with 667MHz DDR3 memory controller		
Optical drive	None		
SATA disk	250GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high, 2.5", not removable		
Widescreen display	10.1" (256.5mm) WSVGA (1024x600) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus		30-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Integrated graphics	Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor, external monitor support via analog VGA DB-15 connector		
Keyboard	Full size keyboard, Fn keys, recovery key, Quick Start button		
Touch pad	One-piece touch pad with two button function		
Dimensions ³	<i>3-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.0"; 268mm x 168mm x 16-25.4mm <i>6-cell:</i> (WxDxH): 10.6" x 6.6" x 0.6-1.1"; 268mm x 168mm x 16-27.4mm		
Weight ²	<i>3-cell:</i> starting at 2.43 lb (1.1 kg) <i>6-cell:</i> starting at 2.65 lb (1.2 kg)		Limited Warranty ¹² ⇨ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Mail-In warranty 78Y1544• 3-year Mail-In warranty 78Y1547• 1-year accidental damage protection via Mail-In 78Y1543• 2-year accidental damage protection via Mail-In 78Y1545• 3-year accidental damage protection via Mail-In 78Y1548 ⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Case color	<i>Top:</i> black; <i>bottom:</i> black <i>Palm rest:</i> black		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion, 3-cell or 6-cell		
Battery - life ¹⁰	<i>3-cell:</i> up to 2.5 hr; <i>6-cell:</i> up to 5.0 hr		
Chipset	Intel NM10 Express Chipset		
ExpressCard/34	None		
Multicard reader	2-in-1 reader (MultiMedia Card, Secure Digital Card)		
Ports	Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCI Express Mini Card slot		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter; Intel, Realtek® or Atheros® chip		
WWAN	None		
Bluetooth™	Bluetooth 3.0 wireless		
Modem	None		
Ethernet	10/100 ethernet, RealTek® RTL8105E		
Audio support	High Definition (HD) Audio, RealTek ALC269 codec / stereo speakers (1.5 watt x 2) / mono microphone, microphone input / headphone combo jack (3.5 mm)		
Security	Power-on password, administrator password, hard disk password		
Fingerprint reader	None		

See footnotes for important warranty information
US model(s) announced September 1, 2011

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Lenovo IdeaPad S205



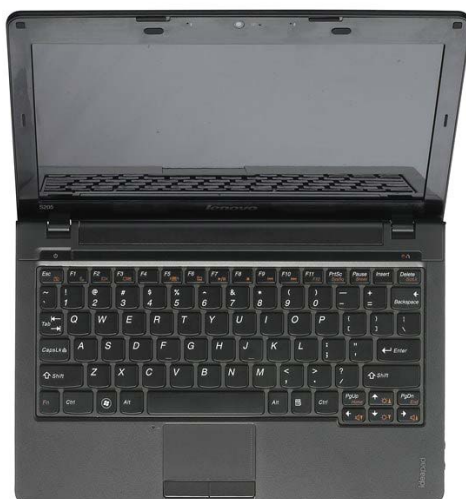
Lenovo IdeaPad S205



Lenovo IdeaPad S205



Lenovo IdeaPad S205



Lenovo IdeaPad S205



Lenovo IdeaPad S205

Type-model	Processor	GHz	Cores	Memory	Widescreen display	Camera	Integrated graphics	SATA disk	PCIe Mini card 802.11	PCIe Mini card WWAN	Top color	Blue-tooth	Battery	Win7 preload	Avail date
1038-27U	AMD E-350	1.60	2	2+1GB	11.6" HD LED	1.3M	HD 6310	320GB ⁸	11b/g/n ²⁸	None	Black		6-cell	Prem 64	May 11
1038-28U	AMD E-350	1.60	2	4GBx1	11.6" HD LED	1.3M	HD 6310	750GB	11b/g/n	None	Black	Blue	6-cell	Prem 64	May 11
1038-29U	AMD E-350	1.60	2	4GBx1	11.6" HD LED	1.3M	HD 6310	500GB	11b/g/n	None	Black		6-cell	Prem 64	May 11
1038-33U	AMD E-300	1.30	2	4GBx1	11.6" HD LED	1.3M	HD 6310	500GB	11b/g/n	None	Black		6-cell	Prem 64	Nov 11
1038-34U	AMD E-450	1.65	2	4GBx1	11.6" HD LED	1.3M	HD 6320	500GB	11b/g/n	None	Black		6-cell	Prem 64	Nov 11
1038-32U	AMD E-450	1.65	2	4GBx1	11.6" HD LED	1.3M	HD 6320	750GB	11b/g/n	None	Black	Blue	6-cell	Prem 64	Nov 11

- 11.6" widescreen, glossy display with LED backlight
- Integrated camera and Lenovo's VeriFace™ face recognition software helps control access to your notebook by recognizing your face
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Netbook; one-spindle</i> AMD Accelerated Processor E-300 (dual-core, 1.30GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz) AMD Accelerated Processor E-350 (dual-core, 1.60GHz, 1MB L2 cache), integrated AMD Radeon HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz) AMD Accelerated Processor E-450 (dual-core, 1.65GHz, 1MB L2 cache), integrated AMD Radeon HD 6320 Graphics, integrated DDR3 memory controller (up to 1333MHz)	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• CyberLink YouCam• Lenovo ReadyComm• ooVoo™• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max / PC3-8500 1066MHz DDR3 , non-parity, two 204-pin SO-DIMM sockets;	
Optical drive	None	
SATA disk	320GB (5400 rpm), 500GB (5400 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high, 2.5" platter, Active Protection System™	
Widescreen display	11.6" (294.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 400:1 contrast ratio	
Camera	Camera on top of screen, 1.3-megapixel, fixed focus	
Integrated graphics	<i>Some:</i> AMD Radeon HD 6310 Graphics , in processor, DirectX® 11, use system memory, <i>Some:</i> AMD Radeon HD 6320 Graphics , in processor, DirectX® 11, use system memory, External monitor support via analog VGA DB-15 connector / digital HDMI connector	
Keyboard	Full size keyboard, Fn keys, 6-row, recovery key	
Touch controls	None	
Light sensor	None	
Touch pad	Two-button touch pad with scroll feature, multi-touch	40-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® qualified RoHS-compliant
Dimensions ³	<i>3-cell:</i> (WxDxH): 11.4" x 7.6" x 1.0-1.2"; 290mm x 193mm x 26.3-30.6mm <i>6-cell:</i> (WxDxH): 11.4" x 7.6" x 1.0-1.5"; 290mm x 193mm x 26.3-37.6mm	
Weight ²	<i>3-cell:</i> starting at 2.89 lb (1.35 kg) <i>6-cell:</i> starting at 3.26 lb (1.48 kg)	
Case color	<i>Top:</i> black; <i>bottom:</i> black	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion, 3-cell or 6-cell	
Battery - life ¹⁰	<i>3-cell:</i> up to 2.5 hr; <i>6-cell:</i> up to 5 hr	
Chipset	AMD A50M FCH	
ExpressCard/34	None	
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)	
Ports	<i>Left side:</i> one USB 2.0 port and VGA DB-15 <i>Right side:</i> two USB 2.0 ports, HDMI, and ethernet (RJ-45)	Limited Warranty ¹² ➤ 1-year warranty*: * 1-year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ➤ Mail In repair service ➤ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair13 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair13 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
TV tuner	None	
PCIe Mini Card	Two PCI Express Mini Card slots	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip	
WWAN	None	
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, LED indicator	
Modem	None	
Ethernet	10/100 ethernet, Atheros AR8105EL	
Audio support	High Definition (HD) Audio, RealTek ALC269® codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), stereo headphone jack (3.5 mm)	
Security	Power-on password, administrator password, hard disk password, security lockhole	
Fingerprint reader	None	

See footnotes for important warranty information

US models announced November 23, 2011; previous models on May 18, 2011

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(MSTO1-1) November 2011



Lenovo IdeaPad U160



Lenovo IdeaPad U160



Lenovo IdeaPad U160
black cover



Lenovo IdeaPad U160
red cover



Lenovo IdeaPad U160
red cover



Lenovo IdeaPad U160
red cover

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera	Integrated graphics	SATA disk	PCIe Mini Card 802.11	Top color	Bluetooth	Battery	Win7 preload	Avail date
⚡ 0894-5JU	i5-520UM	1.06	1.86	4GB	11.6" HD	1.3M	Intel HD	320GB ⁸	11b/g/n ²⁸	Black	Bluetooth	6-cell	Prem 32	Jun 10
⚡ 0894-55U	i7-640UM	1.20	2.26	4GB	11.6" HD	1.3M	Intel HD	500GB	11b/g/n	Black	Bluetooth	6-cell	Prem 64	Jun 10
⚡ 0894-59U	i7-640UM	1.20	2.26	4GB	11.6" HD	1.3M	Intel HD	500GB	11b/g/n	Red	Bluetooth	6-cell	Prem 64	Jun 10
⚡ 0894-5KU	i5-470UM	1.33	1.86	4GB	11.6" HD	1.3M	Intel HD	500GB	11b/g/n	Red	Bluetooth	6-cell	Prem 64	Nov 10
⚡ 0894-5LU	i5-470UM	1.33	1.86	4GB	11.6" HD	1.3M	Intel HD	500GB	11b/g/n	Black	Bluetooth	6-cell	Prem 64	Nov 10
⚡ 0894-5MU	i3-380UM	1.33		4GB	11.6" HD	1.3M	Intel HD	320GB	11b/g/n	Black	Bluetooth	6-cell	Prem 64	Nov 10

- **Thin and light design for easy mobility**
- **11.6" HD widescreen, glossy display with LED backlight**
- **Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Advanced Audio™ certified audio system with stereo speakers (1.5 watt x 2)**
- **HDMI port, HDCP-compliant**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; one-spindle Intel® Core™ i3 processor i3-380UM with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), 3MB cache or Intel Core i5 processor i5-470UM or i5-520UM with dual-core , DMI, integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology, 3MB cache or Intel Core i7 processor i7-640UM with dual-core , DMI, integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology, and 4MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 32 - Some: Genuine Windows 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) • Lenovo® OneKey Recovery • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live™ Essential • CyberLink YouCam • ooVoo™ • Lenovo ReadyComm • Lenovo Energy Management Software • Lenovo DirectShare • VeriFace™ • Lenovo Security Suite • Microsoft Office 2010 preloaded; purchase product key to activate				
Memory	4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available														
Diskette drive	None														
Optical drive	None														
SATA disk	320GB (5400 rpm) or 500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™														
Widescreen display	11.6" (294.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy), LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus														
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector, HDCP-compliant														
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery button														
Light sensor	None														
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch														
Dimensions ³	6-cell: (WxDxH): 11.4" x 7.6" x 0.89"; 290mm x 193mm x 22.5mm														
Weight ²	6-cell: starting at 3.09 lb (1.4kg)														
Case color	Top: black or red top with texture; Bottom: black or red bottom, color matches top color														
Case material	Top: Aluminum Bottom: PC/ABS														
Battery - type	Lithium Ion, 6-cell														
Battery - life ¹⁰	6-cell: up to 7 hr														
Chipset	Mobile Intel HM55 Express Chipset														
ExpressCard/34	None														
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)														
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner	None														
PCIe Mini Card	Two PCI Express Mini Card slots														
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® BCM4313 or Atheros® AR9285														
Bluetooth™	Bluetooth 2.1 wireless, internal USB 2.0 interface														
Modem	None														
Ethernet	Gigabit ethernet, Atheros AR8131														
Audio support	High Definition (HD) Audio, RealTek® ALC269 codec / stereo speakers (1.5 watt x 2), Dolby® Advanced Audio™ certified / dual array microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)														
Security	Administrator password, hard disk password, security keyhole														
Fingerprint reader	None														

See footnotes for important warranty information

⚡ US models announced November 3, 2010; previous models on June 23, 2010

⚡ US models withdrawn effective November 2010

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(LUIT1-1) November 2010



Lenovo IdeaPad U260
Clementine Orange cover



Lenovo IdeaPad U260



Lenovo IdeaPad U260
Mocha Brown cover



Lenovo IdeaPad U260
Mocha Brown cover



Lenovo IdeaPad U260
Clementine Orange cover



Lenovo IdeaPad U260
Mocha Brown cover

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera	Integrated graphics	SATA disk	PCIe Mini Card 802.11	Top color	Bluetooth	Battery	Win7 preload	Avail date
0876-3DU	i5-470UM	1.33	1.86	4GB	12.5" HD	0.3M	Intel HD	320GB ⁸	Intel 1000 ²⁸	Orange	Bluetooth	4-cell	Prem 64	Mar 11
0876-3AU	i3-380UM	1.33		4GB	12.5" HD	0.3M	Intel HD	320GB	Intel 1000	Orange	Bluetooth	4-cell	Prem 64	Mar 11
0876-3BU	i5-470UM	1.33	1.86	4GB	12.5" HD	0.3M	Intel HD	320GB	Intel 1000	Mocha	Bluetooth	4-cell	Prem 64	Mar 11
0876-3CU	i3-380UM	1.33		4GB	12.5" HD	0.3M	Intel HD	320GB	Intel 1000	Mocha	Bluetooth	4-cell	Prem 64	Mar 11

- **Ultra slim and light design for easy mobility**
- **12.5" HD widescreen, anti-glare display with LED backlight**
- **Breathable Keyboard, a spill-resistant keyboard that also dissipates heat through the keys**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby Advanced Audio certified audio system with stereo speakers (1 watt x 2)**
- **HDMI port, HDCP-compliant**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Widescreen flexibility; one-spindle</i> Intel® Core™ i3 processor i3-380UM with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), 3MB cache or Intel Core i5 processor i5-470UM with dual-core , DMI, integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• CyberLink YouCam• ooVoo™• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace™• Lenovo Security Suite• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, one 204-pin SO-DIMM socket		
Diskette drive	None		
Optical drive	None		
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 7mm high, 2.5" platter, Active Protection System™		
Widescreen display	12.5" (317.5mm) HD (WXGA 1366x768) TFT color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, spill-resistant, multimedia Fn keys, recovery button		
Light sensor	Ambient light sensor		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	<i>4-cell: (WxDxH):</i> 12.5" x 8.1" x 0.71"; 318mm x 204.5mm x 18mm		40-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	<i>4-cell:</i> starting at 3.04 lb (1.38kg)		
Case color	<i>Top:</i> Clementine Orange or Mocha Brown top; <i>Bottom:</i> Clementine Orange or Mocha Brown, color matches top color		
Case material	<i>Top:</i> magnesium-aluminum alloy <i>Bottom:</i> magnesium-aluminum alloy		
Battery - type	Lithium Polymer, 4-cell		
Battery - life ¹⁰	<i>4-cell:</i> up to 4 hr		
Chipset	Mobile Intel QS57 Express Chipset		
ExpressCard/34	None		
Multicard reader	None		
Ports	Two USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
PCIe Mini Card	One PCI Express Mini Card slot		
Intel 1000 ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Intel Centrino® Wireless-N 1000, 1x2		
Bluetooth™	Bluetooth 2.1 wireless, internal USB 2.0 interface		
Modem	None		
Ethernet	Gigabit ethernet, Atheros® AR8151		
Audio support	High Definition (HD) Audio, RealTek® ALC269 codec / stereo speakers (1 watt x 2), Dolby® Advanced Audio™ certified / microphone, microphone input and headphone combo jack (3.5 mm)		
Security	Administrator password, hard disk password, security keyhole		
Fingerprint reader	None		

See footnotes for important warranty information
 US models announced March 2, 2011

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 (MARS1-2) March 2011

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera	Integrated graphics	SATA disk	PCIe Mini Card 802.11	Top color	Bluetooth	Battery	Win7 preload	Avail date
0876-33U	i5-470UM	1.33	1.86	4GB	12.5" HD	0.3M	Intel HD	320GB ⁸	Intel 1000 ²⁸	Mocha	Bluetooth	4-cell	Prem 64	Nov 10
0876-32U	i3-380UM	1.33		4GB	12.5" HD	0.3M	Intel HD	320GB	Intel 1000	Mocha	Bluetooth	4-cell	Prem 64	Nov 10
0876-34U	i5-470UM	1.33	1.86	4GB	12.5" HD	0.3M	Intel HD	320GB	Intel 1000	Orange	Bluetooth	4-cell	Prem 64	Nov 10

- **Ultra slim and light design for easy mobility**
- **12.5" HD widescreen, anti-glare display with LED backlight**
- **Breathable Keyboard, an spill-resistant keyboard that also dissipates heat through the keys**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Advanced Audio™ certified audio system with stereo speakers (1 watt x 2)**
- **HDMI port, HDCP-compliant**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Widescreen flexibility; one-spindle</i> Intel® Core™ i3 processor i3-380UM with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), 3MB cache or Intel Core i5 processor i5-470UM with dual-core , DMI, integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essential• CyberLink YouCam• ooVoo™• Lenovo ReadyComm• Lenovo Energy Management Software• Lenovo DirectShare• VeriFace™• Lenovo Security Suite• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, one 204-pin SO-DIMM socket		
Diskette drive	None		
Optical drive	None		
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 7mm high, 2.5" platter, Active Protection System™		
Widescreen display	12.5" (317.5mm) HD (WXGA 1366x768) TFT color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, spill-resistant, multimedia Fn keys, recovery button		
Light sensor	Ambient light sensor		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	<i>4-cell: (WxDxH):</i> 12.5" x 8.1" x 0.71"; 318mm x 204.5mm x 18mm		40-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	<i>4-cell:</i> starting at 3.04 lb (1.38kg)		
Case color	<i>Top:</i> Clementine Orange or Mocha Brown top; <i>Bottom:</i> Clementine Orange or Mocha Brown, color matches top color		
Case material	<i>Top:</i> magnesium-aluminum alloy <i>Bottom:</i> magnesium-aluminum alloy		
Battery - type	Lithium Polymer, 4-cell		
Battery - life ¹⁰	<i>4-cell:</i> up to 4 hr		
Chipset	Mobile Intel QS57 Express Chipset		
ExpressCard/34	None		
Multicard reader	None		
Ports	Two USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		Limited Warranty ¹² ⇨ 1-year parts and labor ⇨ Depot repair service ¹⁹ ⇨ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
PCIe Mini Card	One PCI Express Mini Card slot		
Intel 1000 ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Intel Centrino® Wireless-N 1000, 1x2		
Bluetooth™	Bluetooth 2.1 wireless, internal USB 2.0 interface		
Modem	None		
Ethernet	Gigabit ethernet, Atheros AR8151		
Audio support	High Definition (HD) Audio, RealTek® ALC269 codec / stereo speakers (1 watt x 2), Dolby® Advanced Audio™ certified / microphone, microphone input and headphone combo jack (3.5 mm)		
Security	Administrator password, hard disk password, security keyhole		
Fingerprint reader	None		

See footnotes for important warranty information
 US models announced November 3, 2010

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Lenovo IdeaPad U300s
(Clementine Orange)



Lenovo IdeaPad U300s
(Clementine Orange)



Lenovo IdeaPad U300s
(Graphite Gray)



Lenovo IdeaPad U300s
(Clementine Orange)



Lenovo IdeaPad U300s



Lenovo IdeaPad U300s
(Graphite Gray)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera	Integrated graphics	SATA SSD	PCIe Mini Card 802.11	Top color	Bluetooth	Battery	Win7 preload	Avail date
1080-2BU	i5-2467M	1.60	2.30	4GB	13.3" HD LED	1.3M	Intel HD 3000	128GB ⁸	Intel 1030 ²⁸	Gray	Bluetooth	4-cell	Prem 64	Nov 11
1080-27U	i7-2677M	1.80	2.90	4GB	13.3" HD LED	1.3M	Intel HD 3000	256GB	Intel 1030	Orange	Bluetooth	4-cell	Prem 64	Nov 11
1080-26U	i7-2677M	1.80	2.90	4GB	13.3" HD LED	1.3M	Intel HD 3000	256GB	Intel 1030	Gray	Bluetooth	4-cell	Prem 64	Nov 11

- **Ultra slim and light design for easy mobility**
- **13.3" HD widescreen, glossy display with LED backlight**
- **Breathable Keyboard, an Intel Advanced Cooling Technology that allows the PC to run cooler on your lap by letting airflow through the keyboard**
- **Integrated 1.3 megapixel camera**
- **SRS Premium Surround Sound certified audio system with stereo speakers (1 watt x 2)**
- **HDMI port**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen Ultrabook™ Intel® Core™ i5-2467M processor (2 cores / 4 threads, 1.60GHz, 3MB cache) , integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.30GHz) Intel Core i7-2677M processor (2 cores / 4 threads, 1.80 GHz, 4MB cache) , integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz)		Preloaded operating system ²⁰ - Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Microsoft Security Essentials• Adobe® Reader®• Adobe Flash® Player• Windows Live™ Essentials• CyberLink YouCam• Lenovo Energy Management Software• Absolute Reminder• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	4GB std / 4GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, one 204-pin SO-DIMM socket		
Diskette drive	None		
Optical drive	None		
SATA SSD	128GB or 256GB Solid State Drive (SSD) / NAND flash memory, SATA 3.0Gb/s		
Widescreen display	13.3" (337.8mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor, external digital monitor support via HDMI connector		
Keyboard	Full-size keyboard, 6-row, Fn keys, recovery button		
Light sensor	None		
Touch pad	One-piece touch pad with scroll feature, multi-touch		
Dimensions ³	4-cell: (WxDxH): 12.8" x 8.5" x 0.59"; 324mm x 216mm x 14.9mm		
Weight ²	4-cell: starting at 2.91 lb (1.32kg)		
Case color	Top: Clementine Orange or Graphite Gray top; Bottom: Clementine Orange or Graphite Gray, color matches top color		
Case material	Top: aluminum Bottom: aluminum		
Battery - type	Lithium Polymer, 4-cell		
Battery - life ¹⁰	4-cell: up to 8 hr		
Chipset	Mobile Intel QS67 Express Chipset		
ExpressCard/34	None		
Multicard reader	None		
Ports	One USB 2.0, one USB 3.0, external monitor (HDMI)		
TV tuner	None		
PCIe Mini Card	One PCI Express Mini Card slot		
Intel 1030 ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Intel Centrino® Wireless-N 1030, Wi-Fi + Bluetooth combo adapter, 1x2		
Bluetooth™	Bluetooth 3.0 wireless, integrated in Intel 1030 Wi-Fi + Bluetooth combo adapter		
Modem	None		
Ethernet	None		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1 watt x 2), SRS® Premium Surround Sound™ certified / microphone, microphone input and headphone combo jack (3.5 mm)		
Security	Administrator password, hard disk password		
Fingerprint reader	None		
			65-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
			Limited Warranty ¹² ↩ 1-year parts and labor ↩ Depot repair service ¹⁹ ↩ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ↩ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686

See footnotes for important warranty information
 US models announced November 2, 2011

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IdeaPad™ U300s (1080) - web only models

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera	Integrated graphics	SATA SSD	PCIe Mini Card 802.11	Top color	Bluetooth	Battery	Win7 preload	Avail date
1080-29U	i7-2677M	1.80	2.90	4GB	13.3" HD LED	1.3M	Intel HD 3000	256GB ⁸	Intel 1030 ²⁸	Gray	Bluetooth	4-cell	Prem 64	Dec 11
<ul style="list-style-type: none">• Ultra slim and light design for easy mobility• 13.3" HD widescreen, glossy display with LED backlight• Breathable Keyboard, an Intel Advanced Cooling Technology that allows the PC to run cooler on your lap by letting airflow through the keyboard• Integrated 1.3 megapixel camera• SRS Premium Surround Sound certified audio system with stereo speakers (1 watt x 2)• HDMI port• Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	Widescreen Ultrabook™ Intel® Core™ i7-2677M processor (2 cores / 4 threads, 1.80 GHz, 4MB cache), integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz)										Preloaded operating system²⁰ - Genuine Windows 7 Home Premium 64			
Memory	4GB std / 4GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, one 204-pin SO-DIMM socket										Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Microsoft Security Essentials• Adobe® Reader®• Adobe Flash® Player• Windows Live™ Essentials• CyberLink YouCam• Lenovo Energy Management Software• Absolute Reminder• Microsoft Office 2010 preloaded; purchase product key to activate			
Diskette drive	None										65-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant			
Optical drive	None													
SATA SSD	256GB Solid State Drive (SSD) / NAND flash memory, SATA 3.0Gb/s													
Widescreen display	13.3" (337.8mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	Camera on top of screen, 1.3-megapixel, fixed focus													
Integrated graphics	Intel HD Graphics 3000 in processor, external digital monitor support via HDMI connector										Limited Warranty¹² ⇨ 1-year parts and labor ⇨ Depot repair service¹⁹ ⇨ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686			
Keyboard	Full-size keyboard, 6-row, Fn keys, recovery button													
Light sensor	None													
Touch pad	One-piece touch pad with scroll feature, multi-touch													
Dimensions ³	4-cell: (WxDxH): 12.8" x 8.5" x 0.59"; 324mm x 216mm x 14.9mm													
Weight ²	4-cell: starting at 2.91 lb (1.32kg)													
Case color	Top: Clementine Orange or Graphite Gray top; Bottom: Clementine Orange or Graphite Gray, color matches top color													
Case material	Top: aluminum Bottom: aluminum													
Battery - type	Lithium Polymer, 4-cell													
Battery - life ¹⁰	4-cell: up to 8 hr													
Chipset	Mobile Intel QS67 Express Chipset													
ExpressCard/34	None													
Multicard reader	None													
Ports	One USB 2.0, one USB 3.0, external monitor (HDMI)													
TV tuner	None													
PCIe Mini Card	One PCI Express Mini Card slot													
Intel 1030 ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Intel Centrino® Wireless-N 1030, Wi-Fi + Bluetooth combo adapter, 1x2													
Bluetooth™	Bluetooth 3.0 wireless, integrated in Intel 1030 Wi-Fi + Bluetooth combo adapter													
Modem	None													
Ethernet	None													
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1 watt x 2), SRS® Premium Surround Sound™ certified / microphone, microphone input and headphone combo jack (3.5 mm)													
Security	Administrator password, hard disk password													
Fingerprint reader	None													

See footnotes for important warranty information
 US model(s) announced December 21, 2011

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Lenovo IdeaPad U400
(Graphite Gray)



Lenovo IdeaPad U400
(Graphite Gray)



Lenovo IdeaPad U400
(Graphite Gray)



Lenovo IdeaPad U400
(Graphite Gray)



Lenovo IdeaPad U400
(Graphite Gray)



Lenovo IdeaPad U400
(Graphite Gray)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera	Graphics	SATA disk GB RPM	SATA optical	PCIe Mini Card 802.11	Top color	Blue-tooth	Win7 preload	Avail date
0993-28U	i3-2330M	2.20		4GBx1	14.0" HD LED	1.3M	HD 6470M	500GB ⁸ 5400	DVD±RW	Intel 1030 ²⁸	Gray	BT3.0	Prem 64	Nov 11
0993-29U	i5-2430M	2.40	3.00	4+2GB	14.0" HD LED	1.3M	HD 6470M	750GB 5400	DVD±RW	Intel 1030	Gray	BT3.0	Prem 64	Nov 11

- **Ultra-portable book-shaped design**
- **14.0" HD widescreen, glossy display with LED backlight**
- **Breathable Keyboard, an Intel Advanced Cooling Technology that allows the PC to run cooler on your lap by letting airflow through the keyboard**
- **Integrated 1.3 megapixel camera**
- **SRS Premium Surround Sound certified audio system with stereo speakers (1 watt x 2)**
- **HDMI port**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Widescreen flexibility; two-spindle</i> Intel® Core™ i3-2330M processor (2 cores / 4 threads, 2.20GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2430M processor (2 cores / 4 threads, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology		Preloaded operating system²⁰ - Genuine Windows 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Microsoft Security Essentials• Adobe® Reader®• Adobe Flash® Player• Windows Live™ Essentials• CyberLink YouCam• Lenovo Energy Management Software• Absolute Reminder• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerDVD (DVD±RW)• Microsoft Office 2010 preloaded; purchase product key to activate	
Memory	4GB or 6GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		<div>65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant</div> <div>Limited Warranty¹²<ul style="list-style-type: none">➤ 1-year parts and labor➤ Depot repair service¹⁹➤ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686</div>	
Diskette drive	None			
Optical drive	DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, slot-in			
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™			
Widescreen display	14.0" (355.6mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 1.3-megapixel, fixed focus			
Graphics	Auto switching between discrete and integrated graphics (user selectable for applications), Intel HD Graphics 3000 in processor, and AMD Radeon™ HD 6470M , PCI Express® x16, 1GB memory, DirectX® 11, external digital monitor support via HDMI connector, HDCP-support			
Keyboard	Full-size keyboard, 6-row, Fn keys, recovery button			
Light sensor	None			
Touch pad	One-piece touch pad, multi-touch			
Dimensions ³	<i>(WxDxH):</i> 13.4" x 9.1" x 0.89"; 340mm x 230mm x 22.6mm			
Weight ²	starting at 4.36 lb (1.98 kg)			
Case color	<i>Top:</i> Graphite Gray top; <i>Bottom:</i> Graphite Gray, color matches top color			
Case material	<i>Top:</i> aluminum <i>Bottom:</i> aluminum			
Battery - type	Lithium Polymer, 54Wh			
Battery - life ¹⁰	up to 7 hr			
Chipset	Mobile Intel HM65 Express Chipset			
ExpressCard/34	None			
Multicard reader	None			
Ports	Two USB 2.0, one USB 3.0, external monitor (HDMI), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	Two PCI Express Mini Card slots			
Intel 1030 ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Intel Centrino® Wireless-N 1030, Wi-Fi + Bluetooth combo adapter, 1x2			
Bluetooth™	Bluetooth 3.0 wireless, integrated in Intel 1030 Wi-Fi + Bluetooth combo adapter			
Modem	None			
Ethernet	Gigabit ethernet on planar, Intel 82579V			
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1 watt x 2), SRS® Premium Surround Sound™ certified / microphone, microphone input and headphone combo jack (3.5 mm)			
Security	Supervisor password, hard disk password			
Fingerprint reader	None			

See footnotes for important warranty information
 US models announced November 23, 2011

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IdeaPad™ U400 (0993) - web only models

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera	Graphics	SATA disk GB	RPM	SATA optical	PCIe Mini Card 802.11	Top color	Blue-tooth	Win7 preload	Avail date
0993-2AU	i3-2330M	2.20		4GBx1	14.0" HD LED	1.3M	HD 6470M	500GB ⁸	7200	DVD±RW	Intel 1030 ²⁸	Gray	BT3.0	Prem 64	Nov 11
0993-2DU	i5-2430M	2.40	3.00	4+2GB	14.0" HD LED	1.3M	HD 6470M	750GB	5400	DVD±RW	Intel 1030	Gray	BT3.0	Prem 64	Nov 11
0993-2GU	i7-2620M	2.70	3.40	4GBx2	14.0" HD LED	1.3M	HD 6470M	750GB	5400	DVD±RW	Intel 1030	Gray	BT3.0	Prem 64	Dec 11

- **Ultra-portable book-shaped design**
- **14.0" HD widescreen, glossy display with LED backlight**
- **Breathable Keyboard, an Intel Advanced Cooling Technology that allows the PC to run cooler on your lap by letting airflow through the keyboard**
- **Integrated 1.3 megapixel camera**
- **SRS Premium Surround Sound certified audio system with stereo speakers (1 watt x 2)**
- **HDMI port**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Widescreen flexibility; two-spindle</i> Intel® Core™ i3-2330M processor (2 cores / 4 threads, 2.20GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2430M processor (2 cores / 4 threads, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2620M processor (2 cores / 4 threads, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Microsoft Security Essentials• Adobe® Reader®• Adobe Flash® Player• Windows Live™ Essentials• CyberLink YouCam• Lenovo Energy Management Software• Absolute Reminder• Cyberlink Power2Go (DVD±RW)• CyberLink PowerDVD (DVD±RW)• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	4GB or 6GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Diskette drive	None	
Optical drive	DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, slot-in	
SATA disk	500GB (7200 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™	
Widescreen display	14.0" (355.6mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 1.3-megapixel, fixed focus	
Graphics	Auto switching between discrete and integrated graphics (user selectable for applications), Intel HD Graphics 3000 in processor, and AMD Radeon™ HD 6470M , PCI Express® x16, 1GB memory, DirectX® 11, external digital monitor support via HDMI connector, HDCP-support	
Keyboard	Full-size keyboard, 6-row, Fn keys, recovery button	
Light sensor	None	
Touch pad	One-piece touch pad, multi-touch	
Dimensions ³	(WxDxH): 13.4" x 9.1" x 0.89"; 340mm x 230mm x 22.6mm	65-watt AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	starting at 4.36 lb (1.98 kg)	
Case color	<i>Top:</i> Graphite Gray top; <i>Bottom:</i> Graphite Gray, color matches top color	
Case material	<i>Top:</i> aluminum <i>Bottom:</i> aluminum	
Battery - type	Lithium Polymer, 54Wh	Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Battery - life ¹⁰	up to 7 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	None	
Multicard reader	None	
Ports	Two USB 2.0, one USB 3.0, external monitor (HDMI), ethernet (RJ-45)	
TV tuner	None	
PCIe Mini Card	Two PCI Express Mini Card slots	
Intel 1030 ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Intel Centrino® Wireless-N 1030, Wi-Fi + Bluetooth combo adapter, 1x2	
Bluetooth™	Bluetooth 3.0 wireless, integrated in Intel 1030 Wi-Fi + Bluetooth combo adapter	
Modem	None	
Ethernet	Gigabit ethernet on planar, Intel 82579V	
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1 watt x 2), SRS® Premium Surround Sound™ certified / microphone, microphone input and headphone combo jack (3.5 mm)	
Security	Supervisor password, hard disk password	
Fingerprint reader	None	

See footnotes for important warranty information

☞ US model(s) announced December 21, 2011; previous models on November 23, 2011

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- Limited Warranty¹²**
- ☞ **1-year parts and labor**
 - ☞ **Depot repair service¹⁹**
 - ☞ **Service upgrade options (in eligible locations):⁹**
 - **1-year Lenovo Onsite Repair¹³** 78Y1532
 - **1-year Onsite with accidental damage protection** 78Y1533
 - **2-year Lenovo Onsite Repair¹³** 78Y1536
 - **3-year Lenovo Depot Repair** 78Y1538
 - ☞ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**



Lenovo IdeaPad U460/U460s



Lenovo IdeaPad U460/U460s



Lenovo IdeaPad U460/U460s
Black cover



Lenovo IdeaPad U460/U460s
Black cover



Lenovo IdeaPad U460/U460s
Midnight Plum cover



Lenovo IdeaPad U460/U460s

Personal Systems Reference (PSREF)

- 14.0" HD widescreen, glossy display with LED backlight
- Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Dolby Advanced Audio system with two stereo speakers
- HDMI port, HDCP-compliant
- Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

See footnotes for important warranty information

IdeaPad™ U460 (0877) - Switchable (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Switchable graphics	SATA disk GB ⁸ rpm	PCIe Mini Card 802.11	Top color	Finger print reader	Blue- tooth	Battery	Win7 preload	Avail date
⌘ 0877-22U	i5-450M	2.40	2.66	2GBx2	14.0" HD	Intel HD, GeF 305M	500 5400	Intel 1000 ²⁸	Black	Fing	Blue	8-cell	Prem 64	Jul 10
0877-2AU	i5-560M	2.66	3.20	2GBx2	14.0" HD	Intel HD, GeF 305M	500 5400	Intel 1000	Midnight Plum	Fing	Blue	8-cell	Prem 64	Nov 10
0877-2BU	i5-460M	2.53	2.80	2GBx2	14.0" HD	Intel HD, GeF 305M	500 5400	Intel 1000	Midnight Plum	Fing	Blue	8-cell	Prem 64	Nov 10
0877-25U	i5-460M	2.53	2.80	2GBx2	14.0" HD	Intel HD, GeF 305M	500 7200	Intel 1000	Black	Fing	Blue	8-cell	Prem 64	Dec 10
0877-26U	i5-560M	2.66	3.20	4+2GB	14.0" HD	Intel HD, GeF 305M	500 5400	Intel 1000	Black	Fing	Blue	8-cell	Prem 64	Dec 10
⌘ 0877-2DU	i5-480M	2.66	2.93	2GBx2	14.0" HD	Intel HD, GeF 305M	500 5400	Intel 1000	Midnight Plum	Fing	Blue	8-cell	Prem 64	Feb 11

- 14.0" HD widescreen, glossy display with LED backlight
- Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Dolby® Advanced Audio™ system with two stereo speakers
- HDMI port, HDCP-compliant
- Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; one-spindle Intel® Core™ i5 processor i5-450M, i5-460M, i5-480M, or i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo™ OneKey Recovery • Lenovo ReadyComm • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Fingerprint Software • Windows Live™ Essential • CyberLink YouCam • VeriFace™ • Lenovo Energy Management Software • Lenovo DirectShare • Lenovo Security Suite • ooVoo™ • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	4GB or 6GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;		
Diskette drive	None		
SATA optical drive	None		
SATA disk	500GB (5400 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™		
Widescreen display	14.0" (355.6mm) WXGA (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		65-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Switchable graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA GeForce® 305M , PCI Express® x16, 512MB memory, DirectX® 10.1, NVIDIA PureVideo® HD technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector		
Keyboard	Full-size keyboard, 6-row, Fn keys, recovery button		
Touch controls	GPU switch button, power plan button, and mute button		
Light sensor	Ambient light sensor		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	(WxDxH): 13.3" x 9.3" x 0.8-1.0"; 338mm x 235mm x 21-24.9mm		
Weight ²	8-cell: starting at 4.3 lb (1.95kg)		
Case color	Black top with square weave texture or Midnight Plum with hairline texture, black bottom, and silver palm rest		
Case material	Top and palm rest: PC/ABS with Aluminum cover; bottom: PC/ABS		Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Onsite with accidental damage protection 78Y1533 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day 78Y1540 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Battery - type	Lithium Ion 8-cell		
Battery - life ¹⁰	8-cell: up to 6 hr		
Chipset	Mobile Intel HM55 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Three PCIe Mini Card slots, two full size and one half size		
Intel 1000 ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
Bluetooth™	Bluetooth 2.1 wireless, internal USB 2.0 interface		
Modem	None		
Ethernet	Gigabit ethernet, Atheros® AR8131M		
Audio support	High Definition (HD) Audio, RealTek AD259 codec / stereo speakers (1.5 watt x 2), Dolby® Advanced Audio™ system / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	User password, supervisor password, hard disk password, security keyhole		
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor		

See footnotes for important warranty information

⌘ US model announced February 16, 2011; previous models on July 28, November 3, or December 1, 2010

⌘ US model withdrawn effective November 2010

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(URAL2-2) February 2011

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam-era	Switchable graphics	SATA disk	PCIe Mini Card 802.11	Top color	Finger print reader	Blue-tooth	Battery	Win7 preload	Avail date
0885-25U	i3-330UM	1.20	None	2GBx2	14.0" HD	1.3M	Intel HD, GeF 305M	320GB ⁸	11b/g/n ²⁸	Black	Fing	Blue	8-cell	Prem 64	Jul 10
0885-26U	i3-330UM	1.20	None	2G+1G	14.0" HD	1.3M	Intel HD, GeF 305M	250GB	11b/g/n	Black	Fing	Blue	8-cell	Prem 32	Jul 10

- **14.0" HD widescreen, glossy display with LED backlight**
- **Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Advanced Audio™ system with two stereo speakers**
- **HDMI port, HDCP-compliant**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; one-spindle Intel® Core™ i3 processor i3-330UM with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Hyper-Threading technology and 3MB cache		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 32 - <i>Some:</i> Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo™ OneKey Recovery • Lenovo ReadyComm • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Fingerprint Software • Windows Live™ Essential • CyberLink YouCam • VeriFace™ • Lenovo Energy Management Software • Lenovo DirectShare • Lenovo Security Suite • ooVoo™ • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	3GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;		
Diskette drive	None		
SATA optical drive	None		
SATA disk	250GB (5400 rpm) or 320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™		65-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Widescreen display	14.0" (355.6mm) WXGA (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Switchable graphics	Switches between discrete and integrated graphics via graphics mode software Intel HD Graphics in processor, and NVIDIA® GeForce® 305M , PCI Express® x16, 512MB memory, DirectX® 10.1, NVIDIA PureVideo® HD technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector		
Keyboard	Full-size keyboard, 6-row, Fn keys, recovery button		
Touch controls	GPU switch button, power plan button, and mute button		
Light sensor	Ambient light sensor		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	<i>(WxDxH):</i> 13.3" x 9.3" x 0.8-1.0"; 338mm x 235mm x 21-24.9mm		
Weight ²	<i>8-cell:</i> starting at 4.3 lb (1.95kg)		
Case color	Black top with square weave texture, black bottom, and silver palm rest		Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Onsite with accidental damage protection 78Y1533 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day 78Y1540 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Case material	<i>Top and palm rest:</i> PC/ABS with Aluminum cover; <i>bottom:</i> PC/ABS		
Battery - type	Lithium Ion 8-cell		
Battery - life ¹⁰	<i>8-cell:</i> up to 8 hr		
Chipset	Mobile Intel HM55 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Three PCIe Mini Card slots, two full size and one half size		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom® or Atheros® chip		
Bluetooth™	Bluetooth 2.1 wireless, internal USB 2.0 interface		
Modem	None		
Ethernet	Gigabit ethernet, Atheros® AR8131M		
Audio support	High Definition (HD) Audio, RealTek AD259 codec / stereo speakers (1.5 watt x 2), Dolby® Advanced Audio™ system / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	User password, supervisor password, hard disk password, security keyhole		
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor		

See footnotes for important warranty information
US models announced July 28, 2010

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Lenovo IdeaPad U550



Lenovo IdeaPad U550



Lenovo IdeaPad U550



Lenovo IdeaPad U550 cover



Lenovo IdeaPad U550



Lenovo IdeaPad U550
Lightweave pattern cover

Type-model	Pro- cessor	GHz	Memory	Widescreen display	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Finger Top color print reader	Blue- tooth	Battery	Win 7 preload	Avail date
3749-5EU	SU4100	1.30	3GB	15.6" HD	1.3M	GMA 4500MHD	250GB ⁸	DVD±RW	Intel 5100 ²⁸	Black Fing	Blue	6-cell	Prem 32	Oct 09
3749-54U	SU4100	1.30	4GB	15.6" HD	1.3M	GMA 4500MHD	250GB	DVD±RW	Intel 5100	Black Fing	Blue	6-cell	Prem 32	Oct 09
3749-59U	SU7300	1.30	4GB	15.6" HD	1.3M	GMA 4500MHD	320GB	DVD±RW	Intel 5100	Black Fing		6-cell	Prem 64	Oct 09
3749-5BU	SU4100	1.30	3GB	15.6" HD	1.3M	GMA 4500MHD	250GB	DVD±RW	11b/g ¹¹	Black Fing		6-cell	Prem 32	Apr 10

- **15.6" HD widescreen, glossy display with LED backlight**
- **Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Home Sound Room™ premium audio system with two stereo speakers**
- **HDMI port, HDCP-compliant**
- **Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Pentium® processor SU4100 with ultra low voltage, dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo processor SU7300 with ultra low voltage, dual-core , 800MHz system bus, and 3MB L2 cache	Preloaded operating system ²⁰ - Some: Genuine Windows® 7 Home Premium 32 - Some: Genuine Windows 7 Home Premium 64
Memory	3GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available;	Preloaded applications ¹⁴ (only some listed) • Lenovo™ OneKey Recovery • Lenovo ReadyComm • McAfee VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Fingerprint Software • Easy Capture • Microsoft® Office 2007 Trial (60-day) • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW)
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, tray-in 250GB (5400 rpm) or 320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, not removable	
Widescreen display Camera	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus	
Integrated graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GS45, External monitor support via analog VGA DB-15 connector / digital HDMI connector; Maximum external resolution: 2048x1536@75Hz (VGA)	
Keyboard Numeric keypad Light sensor Touch pad	Full-size keyboard, 6-row, multimedia Fn keys, recovery button Numeric keypad on right of keyboard Ambient light sensor Two-button touch pad with scroll feature (no TrackPoint®), multi-touch	
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 14.8" x 9.9" x 0.9-1.2"; 377mm x 251mm x 24~29.4mm 6-cell: starting at 5.3 lb (2.4kg) Black top with square weave texture, black bottom Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Lithium Ion 6-cell 6-cell: up to 6 hr	65-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
Chipset	Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), 82801IUX-SFF I/O Controller Hub (ICH9M-SFF) (SATA 3Gb/s, USB 2.0, PCI Express® 1.1, ethernet MAC)	
ExpressCard/34 Multicard reader	None 4-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card)	Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Onsite with accidental damage protection 78Y1533 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day 78Y1540 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Ports	Three USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
TV tuner PCIe Mini Card 11b/g ¹¹ Intel 5100 ²⁸ Bluetooth™ Modem Ethernet Audio support	None Two Mini PCI Express slots Some: 11b/g wireless ⁴ , PCIe Mini Card, Broadcom® BCM4312 Some: 11a/b/g/n wireless ⁴ , PCIe Mini Card, Intel WiFi Link 5100, 1x2 (Shirley Peak) Some: Bluetooth 2.1 wireless, USB 2.0 interface via ICH9M, LED indicator None Gigabit ethernet, Atheros® AR8131 High Definition (HD) Audio, RealTek AD269 codec / two stereo speakers (1.5 watt), Dolby® Home Sound Room™ audio system / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm) Power-on password, hard disk password, supervisor password, security keyhole	
Security Fingerprint reader	Fingerprint reader on palm rest, swipe sensor	

See footnotes for important warranty information

US model announced April 7, 2010; previous models on October 22, 2009

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(URL2-1) April 2010

Type-model	Pro- cessor	GHz	Memory	Widescreen display	Cam- era	Switchable graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Top color	Finger print reader	Blue- tooth	Battery	Win 7 preload	Avail date
3749-55U	SU7300	1.30	4GB	15.6" HD	1.3M	GMA, HD4330	320GB ⁸	DVD±RW	Intel 5100 ²⁸	Black	Fing	Blue	6-cell	Prem 64	Oct 09

- **15.6" HD widescreen, glossy display with LED backlight**
- **Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Home Sound Room™ premium audio system with two stereo speakers**
- **HDMI port, HDCP-compliant**
- **Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ 2 Duo processor SU7300 with ultra low voltage, dual-core , 800MHz system bus, and 3MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo™ OneKey Recovery • Lenovo ReadyComm • McAfee VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Fingerprint Software • Easy Capture • Microsoft® Office 2007 Trial (60-day) • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW)
Memory	4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available;		
Diskette drive	None		
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, tray-in		
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, not removable		
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus		
Switchable graphics	Dynamic switching between discrete and integrated graphics (user selectable), Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GS45, and ATI™ Mobility Radeon™ HD 4330 , PCI Express® x16, 512MB memory, DirectX® 10.1, ATI Avivo™ HD, VGA connector, HDMI connector, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery button		
Numeric keypad	Numeric keypad on right of keyboard		
Light sensor	Ambient light sensor		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	(WxDxH): 14.8" x 9.9" x 0.9-1.2"; 377mm x 251mm x 24~29.4mm		
Weight ²	6-cell: starting at 5.3 lb (2.4kg)		
Case color	Black top with square weave texture, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	6-cell: Up to 4 hr (discrete graphics); up to 6 hr (integrated graphics)		
Chipset	Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), 82801IUX-SFF I/O Controller Hub (ICH9M-SFF) (SATA 3Gb/s, USB 2.0, PCI Express® 1.1, ethernet MAC)		
ExpressCard/34	None		
Multicard reader	4-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card)		
Ports	Three USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
Mini PCI Express	Two Mini PCI Express slots		
Intel 5100 ²⁸	11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)		
Bluetooth™	Bluetooth 2.1 wireless, USB 2.0 interface via ICH9M, LED indicator		
Modem	None		
Ethernet	Gigabit ethernet, Atheros® AR8131		
Audio support	High Definition (HD) Audio, RealTek AD269 codec / two stereo speakers (1.5 watt), Dolby® Home Sound Room™ audio system / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor		
			65-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant
			Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Onsite with accidental damage protection 78Y1533 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day 78Y1540 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686

See footnotes for important warranty information
US model announced October 22, 2009

Intel Centrino® 2 processor technology

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Lenovo IdeaPad V460



Lenovo IdeaPad V460



Lenovo IdeaPad V460



Lenovo IdeaPad V460



Lenovo IdeaPad V460



Lenovo IdeaPad V460

IdeaPad™ V460 (0886) - GMA (Windows 7) - web only models

Personal Systems Reference (PSREF)

	Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Finger print reader	Blue- tooth	Win7 preload	Avail date
PC	0886-27U	i3-330M	2.13	None	4GB	14.0" HD	LED	1.3M	Intel HD	320GB ⁸	DVD±RW	Intel 1000	Black	Fing Fing	Blue	Prem 64	Mar 10
ES	0886-2PU	i3-370M	2.40	None	4GB	14.0" HD	LED	1.3M	Intel HD	320GB	DVD±RW	Intel 1000	Black	Fing Fing	Blue	Prem 64	Dec 10

- **14.0" widescreen, glossy display with LED backlight**
- **Integrated 1.3 megapixel camera**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **Fingerprint reader for easy and secure login**
- **BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage password**
- **USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-330M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available;	Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essential • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo Security Suite • USB Port Locker • BioExcess
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™	
Widescreen display display Camera	14.0" (355.6mm) HD (WXGA 1366x768) TFT color , VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector	
Keyboard Touch controls Light sensor Touch pad	Full-size keyboard, 6-row, recovery key Touch-sensitive buttons for volume +/-, mute, and Lenovo Security Suite None Two-button touch pad with scroll feature (no TrackPoint®)	
Dimensions ³ Weight ² Case color Case material	(WxDxH): 13.4" x 9.2" x 0.8" to 1.3"; 340mm x 234.6mm x 20.2mm to 32.9mm with optical drive and battery: <i>6-cell</i> : 4.85 lb (2.2 kg) Black top, black bottom <i>Top and palm rest:</i> Aluminum <i>Bottom:</i> Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	65-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell Up to 4 hr	Limited Warranty¹²
Chipset ExpressCard/34 Multicard reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 4-in-1 reader (MMC, Memory Stick PRO™, Secure Digital Card, SDHC Card) Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)	⇒ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇒ Mail In repair service ⇒ Service upgrade options (in eligible locations):⁹ • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538
TV tuner PCIe Mini Card Intel 1000 Bluetooth™ Modem Ethernet Audio support	None Two PCIe Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Bluetooth 2.1 wireless + EDR, USB 2.0 interface None Gigabit ethernet, Atheros® AR8131, PCIe x1 High Definition (HD) Audio, RealTek® ALC269 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)	• 24x¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
Security Fingerprint reader	Power-on password, hard disk password, supervisor password, security lockhole Fingerprint reader on palm rest, swipe sensor	

See footnotes for important warranty information

US model announced December 1, 2010; previous model on March 24, 2010

- ✂ US model withdrawn effective December 2010

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(ALM1-1) March 2011

IdeaPad™ V460 (0886) - Switchable (web only models)

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Widescreen or LED	Memory display	CCFL or LED	Switchable graphics	SATA disk GB ³ rpm	SATA optical	PCIe Mini Card 802.11	Finger print reader	Win7 preload	Avail date
⌘ 0886-26U	i5-430M	2.26	2.53	4GB	14.0" HD	LED	Intel HD, GF 310M 512MB	320GB 5400	DVD±RW	Intel 1000	Black	Fing	Prem 64 Mar 10
⌘ 0886-2MU	i5-560M	2.66	3.20	4GB	14.0" HD	LED	Intel HD, GF 310M 1GB	500GB 7200	DVD±RW	Intel 1000	Black	Fing	Prem 64 Dec 10
⌘ 0886-2NU	i5-460M	2.53	2.80	4GB	14.0" HD	LED	Intel HD, GF 310M 512MB	500GB 5400	DVD±RW	Intel 1000	Black	Fing	Prem 64 Dec 10

- 14.0" widescreen, glossy display with LED backlight
- Dynamic switching between discrete and integrated graphics (user selectable)
- Integrated 1.3 megapixel camera
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- Fingerprint reader for easy and secure login
- BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage password
- USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5 processor i5-430M, i5-460M, or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache								Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64				
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available								Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essential • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo Security Suite • USB Port Locker • BioExcess				
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 320GB (5400 rpm), 500GB (5400 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™												
Widescreen display Camera	14.0" (355.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator												
Switchable graphics	Switches between discrete and integrated graphics via graphic switch Intel HD Graphics in processor, and NVIDIA® GeForce® 310M , PCI Express x16, 512MB or 1GB memory, DirectX 10.1, PureVideo® HD technology, CUDA™ technology, VGA, HDMI, HDCP-compliant												
Keyboard Touch controls Light sensor Touch pad	Full-size keyboard, 6-row, recovery key Touch-sensitive buttons for volume +/-, mute, and Lenovo Security Suite None Two-button touch pad with scroll feature (no TrackPoint®)								65-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant				
Dimensions ³ Weight ² Case color Case material	(WxDxH): 13.4" x 9.2" x 0.8" to 1.3"; 340mm x 234.6mm x 20.2mm to 32.9mm with optical drive and battery: <i>6-cell</i> : 4.85 lb (2.2 kg) Black top, black bottom <i>Top and palm rest:</i> Aluminum <i>Bottom:</i> Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic												
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell Up to 4 hr												
Chipset ExpressCard/34 Multicard reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 4-in-1 reader (MMC, Memory Stick PRO™, Secure Digital Card, SDHC Card) Three USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)												
TV tuner PCIe Mini Card Intel 1000 Bluetooth™ Modem Ethernet Audio support	None Two PCIe Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Bluetooth 2.1 wireless + EDR, USB 2.0 interface None Gigabit ethernet, Atheros® AR8131, PCIe x1 High Definition (HD) Audio, RealTek® ALC269 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)												
Security Fingerprint reader	Power-on password, hard disk password, supervisor password, security lockhole Fingerprint reader on palm rest, swipe sensor												

See footnotes for important warranty information

⌘ US models announced December 1, 2010; previous model on March 24, 2010

⌘ US model withdrawn effective December 2010

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(ALM1-2) March 2011

- Limited Warranty¹²**
- ⌘ **1-year warranty*:**
 - * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter
 - ⌘ **Mail In repair service**
 - ⌘ **Service upgrade options (in eligible locations):⁹**
 - 1-year Lenovo Onsite Repair¹³ 78Y1532
 - 1-year Onsite with accidental damage protection 78Y1533
 - 2-year Lenovo Onsite Repair¹³ 78Y1536
 - 3-year Lenovo Depot Repair 78Y1538
 - ⌘ **24x¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**

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Lenovo IdeaPad Y460



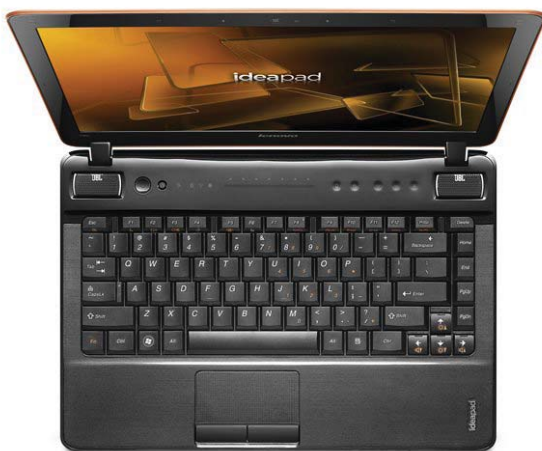
Lenovo IdeaPad Y460



Lenovo IdeaPad Y460



Lenovo IdeaPad Y460



Lenovo IdeaPad Y460



Lenovo IdeaPad Y460

Personal Systems Reference (PSREF)

See footnotes for important warranty information
 ☛ US model announced November 23, 2011;
 previous models on January 12, February 16, May 18, or September 1, 2011

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Lenovo IdeaPad Y470



Lenovo IdeaPad Y470



Lenovo IdeaPad Y470



Lenovo IdeaPad Y470



Lenovo IdeaPad Y470



Lenovo IdeaPad Y470

IdeaPad™ Y470 (0855) - NVIDIA (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Discrete graphics	SATA disk GB ¹	rpm	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	USB3.0 Con- nector	Win7 preload	Avail date
0855-22U	i3-2310M	2.10		2GBx2	14.0" HD	LED	GT 550M	500GB	7200	DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0855-23U	i5-2410M	2.30	2.90	2GBx2	14.0" HD	LED	GT 550M	500GB	7200	DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0855-24U	i5-2410M	2.30	2.90	2GBx2	14.0" HD	LED	GT 550M	750GB	5400	Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0855-25U	i7-2630QM	2.00	2.90	4GBx2	14.0" HD	LED	GT 550M	500GB	7200	DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0855-26U	i7-2630QM	2.00	2.90	4GBx2	14.0" HD	LED	GT 550M	750GB	5400	Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0855-28U	i3-2330M	2.20		4GBx1	14.0" HD	LED	GT 550M	500GB	5400	DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0855-2EU	i7-2670QM	2.20	3.10	4GBx2	14.0" HD	LED	GT 550M	750GB	5400	DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0855-2DU	i7-2670QM	2.20	3.10	4GBx2	14.0" HD	LED	GT 550M	750GB	5400	Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0855-2GU	i5-2430M	2.40	3.00	4GBx1	14.0" HD	LED	GT 550M	750GB	5400	DVD±RW	Intel 1000	Black	Blue	USB3.0	Pro 64	Dec 11
0855-2HU	i7-2670QM	2.20	3.10	4GBx2	14.0" HD	LED	GT 550M	500GB	7200	DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Dec 11

- **14.0" widescreen, glossy display with LED backlight**
- **Integrated 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound audio system with two JBL® stereo speakers**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00 GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20 GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none"> • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink PowerDVD (DVD±RW, Blu-ray) • Cyberlink Power2Go (DVD±RW, Blu-ray) • Lenovo DirectShare 					
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets															
SATA optical	Some: DVD burner, dual-layer support, 12.7mm high, tray-in Some: Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in															
SATA disk	500GB (5400 rpm), 500GB (7200 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high															
mSATA™ SSD	None															
Widescreen display	14.0" (355.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio															
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator															
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® GT 550M , PCI Express® x16, 1GB DDR3 memory, DirectX® 11, NVIDIA CUDA™ technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector															
Keyboard	Full-size keyboard, 6-row, recovery key															
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control															
Light sensor	None															
Touch pad	Two-button touch pad with scroll feature, multi-touch															
Dimensions ³	(WxDxH): 13.6" x 9.4" x 0.8" to 1.3"; 345mm x 239mm x 20mm to 32.8mm with optical drive and battery: 6-cell: 4.85 lb (2.2 kg)															
Weight ²																
Case color	Dusk black top with texture, black bottom															
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic															
Battery - type	Lithium Ion 6-cell															
Battery - life ¹⁰	Up to 4.0 hr															
Chipset	Mobile Intel HM65 Express Chipset															
ExpressCard/34	None															
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)															
Ports	Left side: two USB 3.0 ports, external monitor (VGA DB-15, HDMI), ethernet (RJ-45) Right side: one USB 2.0 port and one eSATA/USB combo port															
TV tuner	None															
PCIe Mini Card	Two PCIe Mini Card slots															
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000															
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface															
Modem	None															
Ethernet	Gigabit ethernet, Broadcom® BCM57780/BCM57781, PCIe x1															
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / JBL® stereo speakers (1.5 watt x 2), SRS® Premium Sound™ / dual array microphone, microphone input jack (3.5 mm), headphone jack (S/PDIF-out) (stereo, 3.5 mm)															
Security	Hard disk password, administrator password, security lockhole															
Fingerprint reader	None															

See footnotes for important warranty information

US models announced December 21, 2011; previous models on May 18 or November 23, 2011

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(WHSK1-1) December 2011

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Lenovo IdeaPad Y560



Lenovo IdeaPad Y560



Lenovo IdeaPad Y560



Lenovo IdeaPad Y560



Lenovo IdeaPad Y560



Lenovo IdeaPad Y560

Type-model	Pro- cessor	Max turbo GHz (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Discrete graphics	SATA disk GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
0646-2KU	i7-720QM	1.60	2.80	2GBx2	15.6" HD (3D)	LED	1.3M	HD 5730	500G 7200	DVD±RW	Intel 6200 ²⁸	Black	None	Prem 64 Feb 11

- **15.6" widescreen, glossy display with LED backlight**
- **3D panel and glasses - enjoy compatible games and movies in 3D vision**
- **Lenovo® Desktop Navigator easily toggles among shortcuts, files, and other frequently used programs with touch-sensitive SlideNav bar**
- **Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **Dolby® Home Theater® premium audio system with two JBL® stereo speakers**
- **Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i7 processor i7-720QM with quad-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology, 6MB cache			Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64		
Memory	4GB std / 8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essential• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerDVD (3D models)• TriDef Media Player (3D models)• Lenovo DirectShare• Lenovo SlideNav		
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 500GB (7200 rpm) / SATA 3.0Gb/s, 9.5mm high			120-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant		
Widescreen display 3D glasses Camera	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, with 3D panel 3D glasses and clip-on lenses for conversion of normal optical glasses Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator					
Discrete graphics	ATI Mobility Radeon™ HD 5730 , PCI Express® x16, 1GB memory, DirectX® 11, ATI Avivo™ HD, VGA connector, HDMI connector, HDCP-compliant					
Keyboard Touch controls Light sensor Touch pad	Full-size keyboard, 6-row, recovery key, mute, volume up, volume down buttons Lenovo SlideNav bar, OneKey Theater and Energy Management keys Ambient light sensor Two-button touch pad with scroll feature (no TrackPoint®), multi-touch					
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 15.2" x 10.0" x 0.8" to 1.3"; 385mm x 255mm x 20mm to 33mm with optical drive and battery: <i>6-cell</i> : 5.95lb (2.7 kg) Black top with engraved pattern, black bottom Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Lithium Ion 6-cell Up to 3 hr					
Chipset ExpressCard/34 Multicard reader	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™) Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)					
Ports						
TV tuner PCIe Mini Card Intel 6200 ²⁸ Bluetooth™ Modem Ethernet Audio support	None Three PCIe Mini Card slots 11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 None None Gigabit ethernet, Broadcom® BCM57780, PCIe x1 High Definition (HD) Audio, RealTek® ALC272 codec / JBL® stereo speakers (1.5 watt x 2), Dolby Home Theater Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (S/PDIF-out) (stereo, 3.5 mm) Power-on password, hard disk password, supervisor password, security lockhole					
Security Fingerprint reader	None			Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686		

See footnotes for important warranty information
US model announced February 16, 2011

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IdeaPad™ Y560d (0646) - 3D (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Discrete graphics	SATA disk GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
0646-2NU	i7-720QM	1.60	2.80	2GBx2	15.6" HD (3D)	LED	1.3M	HD 5730	500G 7200	DVD±RW	Intel 6200 ²⁸	Black	Blue	Prem 64	Oct 10
0646-57U	i7-740QM	1.73	2.93	4+2GB	15.6" HD (3D)	LED	1.3M	HD 5730	500G 7200	DVD±RW	Intel 6200	Black	Blue	Prem 64	Oct 10

- 15.6" widescreen, glossy display with LED backlight
- 3D panel and glasses - enjoy compatible games and movies in 3D vision
- Lenovo® Desktop Navigator easily toggles among shortcuts, files, and other frequently used programs with touch-sensitive SlideNav bar
- Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- Dolby® Home Theater® premium audio system with two JBL® stereo speakers
- Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These system are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i7 processor i7-720QM or i7-740QM with quad-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology, 6MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64	
Memory	4GB or 6GB std / 8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essential• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Cyberlink PowerDVD (3D models)• TriDef Media Player (3D models)• Lenovo DirectShare• Lenovo SlideNav	
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 500GB (7200 rpm) / SATA 3.0Gb/s, 9.5mm high		120-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant	
Widescreen display 3D glasses Camera	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, with 3D panel 3D glasses and clip-on lenses for conversion of normal optical glasses Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator			
Discrete graphics	ATI™ Mobility Radeon™ HD 5730 , PCI Express® x16, 1GB memory, DirectX® 11, ATI Avivo™ HD, VGA connector, HDMI connector, HDCP-compliant			
Keyboard Touch controls Light sensor Touch pad	Full-size keyboard, 6-row, recovery key, mute, volume up, volume down buttons Lenovo SlideNav bar, OneKey Theater and Energy Management keys Ambient light sensor Two-button touch pad with scroll feature (no TrackPoint®), multi-touch			
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 15.2" x 10.0" x 0.8" to 1.3"; 385mm x 255mm x 20mm to 33mm with optical drive and battery: 6-cell : 5.95lb (2.7 kg) Black top with engraved pattern, black bottom Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Lithium Ion 6-cell Up to 3 hr			
Chipset ExpressCard/34 Multicard reader	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)			
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
TV tuner PCIe Mini Card Intel 6200 ²⁸ Bluetooth™ Modem Ethernet Audio support	None Three PCIe Mini Card slots 11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Bluetooth 2.1 wireless + EDR, USB 2.0 interface, LED indicator None Gigabit ethernet, Broadcom® BCM57780, PCIe x1 High Definition (HD) Audio, RealTek® ALC272 codec / JBL® stereo speakers (1.5 watt x 2), Dolby Home Theater Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (S/PDIF-out) (stereo, 3.5 mm) Power-on password, hard disk password, supervisor password, security lockhole			
Security Fingerprint reader	None		Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686	

See footnotes for important warranty information
US models announced September 28, 2010

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(HW11-6) October 2010

- Limited Warranty¹²**
- ⇒ **1-year parts and labor**
 - ⇒ **Depot repair service¹⁹**
 - ⇒ **Service upgrade options (in eligible locations):⁹**
 - **1-year Lenovo Onsite Repair¹³** 78Y1532
 - **1-year Onsite with accidental damage protection** 78Y1533
 - **2-year Lenovo Onsite Repair¹³** 78Y1536
 - **3-year Lenovo Depot Repair** 78Y1538
 - ⇒ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**

IdeaPad™ Y560p (4397) - AMD® Radeon™ (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam-era	Discrete graphics	SATA disk	mSATA SSD	SATA optical	PCIe Mini Card 802.11	Top color	Blue-tooth	Win7 preload	Avail date
4397-22U	i7-2630QM	2.00	2.90	2+4GB	15.6" HD	LED	1.3M	HD 6570M	750GB ⁸	None	DVD±RW	11b/g/n	Black	Blue	Prem 64	Jan 11
4397-23U	i7-2630QM	2.00	2.90	2GBx2	15.6" HD	LED	1.3M	HD 6570M	500GB	None	DVD±RW	11b/g/n	Black	Blue	Prem 64	Jan 11

- 15.6" widescreen, glossy display with LED backlight
- Lenovo® Desktop Navigator easily toggles among shortcuts, files, and other frequently used programs with touch-sensitive SlideNav bar
- Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- Dolby® Home Theater® premium audio system with two JBL® stereo speakers
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i7-2630QM processor (quad-core, 2.00 GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW, Blu-ray)• Lenovo DirectShare• Lenovo SlideNav
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Diskette drive	None		
SATA optical	DVD burner, dual-layer support, 12.7mm high, tray-in		
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high		
mSATA™ SSD	None		
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator		
Discrete graphics	AMD® Radeon™ HD 6570M Graphics , PCI Express® x16, 1GB memory, DirectX® 11, VGA connector, HDMI connector, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, recovery key, mute, volume up, volume down buttons		
Touch controls	Lenovo SlideNav bar, OneKey Theater and Energy Management keys		
Light sensor	None		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	(WxDxH): 15.2" x 10.0" x 0.8" to 1.3"; 385mm x 255mm x 20mm to 33mm		
Weight ²	with optical drive and battery: 6-cell: 5.95lb (2.7 kg)		
Case color	Black top with hairline texture, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	Up to 3 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard/34	One slot (ExpressCard/34)		
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)		
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Three PCIe Mini Card slots		
11b/g/n	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® or Atheros® chip, 1x2		
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface, LED indicator		
Modem	None		
Ethernet	Gigabit ethernet, Broadcom BCM57780, PCIe x1		
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / JBL® stereo speakers (1.5 watt x 2), Dolby Home Theater Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (S/PDIF-out) (stereo, 3.5 mm)		
Security	Hard disk password, supervisor password, security lockhole		
Fingerprint reader	None		

Limited Warranty ¹²	
⇨	1-year parts and labor
⇨	Depot repair service ¹⁹
⇨	Service upgrade options (in eligible locations): ⁹
	• 1-year Lenovo Onsite Repair ¹³ 78Y1532
	• 1-year Onsite with accidental damage protection 78Y1533
	• 2-year Lenovo Onsite Repair ¹³ 78Y1536
	• 3-year Lenovo Depot Repair 78Y1538
⇨	24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686

See footnotes for important warranty information
US models announced January 12, 2011

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(GL2-1) January 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Discrete graphics	SATA disk GB ³ rpm	mSATA SSD	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
4397-24U	i3-2310M	2.10		2GBx2	15.6" HD	LED	HD 6570M	500GB 5400		DVD±RW	Intel 1000	Black	Blue	Prem 64	Jan 11
4397-25U	i5-2410M	2.30	2.90	2+4GB	15.6" HD	LED	HD 6570M	500GB 5400		DVD±RW	Intel 1000	Black	Blue	Prem 64	Jan 11
4397-26U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	HD 6570M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	Prem 64	Jan 11
4397-27U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	HD 6570M	750GB 5400	32GB	Blu-ray	Intel 1000	Black	Blue	Prem 64	Jan 11
4397-29U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	HD 6570M	500GB 7200		DVD±RW	Intel 1000	Black	Blue	Prem 64	Feb 11
4397-2DU	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	HD 6570M	500GB 7200		Blu-ray	Intel 1000	Black	Blue	Prem 64	May 11
4397-2FU	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	HD 6570M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	Prem 64	May 11
4397-2EU	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	HD 6570M	500GB 7200		DVD±RW	Intel 1000	Black	Blue	Prem 64	Jun 11
4397-28U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	HD 6570M	500GB 5400		DVD±RW	Intel 1000	Black	Blue	Prem 64	Jun 11
4397-2GU	i3-2310M	2.10		2+4GB	15.6" HD	LED	HD 6570M	500GB 5400		DVD±RW	Intel 1000	Black	Blue	Prem 64	Sep 11
4397-2HU	i3-2310M	2.10		2GBx2	15.6" HD	LED	HD 6570M	500GB 5400		Blu-ray	Intel 1000	Black	Blue	Prem 64	Sep 11

- 15.6" widescreen, glossy display with LED backlight
- Lenovo® Desktop Navigator easily toggles among shortcuts, files, and other frequently used programs with touch-sensitive SlideNav bar
- Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- Dolby® Home Theater® premium audio system with two JBL® stereo speakers
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00 GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essential • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW, Blu-ray) • Lenovo DirectShare • Lenovo SlideNav
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Diskette drive	None	
SATA optical	Some: DVD burner, dual-layer support, 12.7mm high, tray-in Some: Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in	
SATA disk	500GB (5400 rpm), 500GB (7200 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high	
mSATA™ SSD	Some: 32GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot	
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator	
Discrete graphics	AMD Radeon™ HD 6570M Graphics , PCI Express® x16, 1GB memory, DirectX® 11, VGA connector, HDMI connector, HDCP-compliant	
Keyboard	Full-size keyboard, 6-row, recovery key, mute, volume up, volume down buttons	
Touch controls	Lenovo SlideNav bar, OneKey Theater and Energy Management keys	
Light sensor	None	
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch	
Dimensions ³	(WxDxH): 15.2" x 10.0" x 0.8" to 1.3"; 385mm x 255mm x 20mm to 33mm	
Weight ²	with optical drive and battery: 6-cell : 5.95lb (2.7 kg)	
Case color	Black top with hairline texture, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	Up to 3 hr	Dual-core models: 90-watt AC adapter Quad-core models: 120-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	One slot (ExpressCard/34)	
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)	Limited Warranty¹² ⇒ 1-year parts and labor ⇒ Depot repair service¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
TV tuner	None	
PCIe Mini Card	Three PCIe Mini Card slots	
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface, LED indicator	
Modem	None	
Ethernet	Gigabit ethernet, Broadcom® BCM57780, PCIe x1	
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / JBL® stereo speakers (1.5 watt x 2), Dolby Home Theater Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (S/PDIF-out) (stereo, 3.5 mm)	
Security	Hard disk password, supervisor password, security lockhole	
Fingerprint reader	None	

See footnotes for important warranty information

US models announced September 1, 2011;

previous models on January 12, February 16, May 18, or June 22, 2011



Lenovo IdeaPad Y570



Lenovo IdeaPad Y570



Lenovo IdeaPad Y570



Lenovo IdeaPad Y570



Lenovo IdeaPad Y570



Lenovo IdeaPad Y570

IdeaPad™ Y570 (0862) - NVIDIA (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Discrete graphics	SATA disk GB ⁸ rpm	mSATA SSD	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	USB3.0 Conne- ctor	Win7 preload	Avail date
0862-2MU	i5-2410M	2.30	2.90	2GBx2	15.6" HD	LED	GT 555M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Jul 11
0862-2LU	i5-2410M	2.30	2.90	4+2GB	15.6" HD	LED	GT 555M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Jul 11
0862-2KU	i7-2630QM	2.00	2.90	4+2GB	15.6" HD	LED	GT 555M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Jul 11
0862-2JU	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	GT 555M	750GB 5400		Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	Jul 11
0862-2ZU	i5-2430M	2.40	3.00	4+2GB	15.6" HD	LED	GT 555M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0862-64U	i7-2670QM	2.20	3.10	4GBx2	15.6" HD	LED	GT 555M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0862-62U	i7-2670QM	2.20	3.10	4GBx2	15.6" HD	LED	GT 555M	750GB 5400	64GB	Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
<ul style="list-style-type: none">• 15.6" widescreen, glossy display with LED backlight• Integrated 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face• Touch pad supports multi-touch function (pinch, expansion, chiral motion)• SRS Premium Sound audio system with two JBL® stereo speakers• Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows• OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology											Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink PowerDVD (DVD±RW, Blu-ray)• Cyberlink Power2Go (DVD±RW, Blu-ray)• Lenovo DirectShare				
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											<div>120-watt AC adapter</div> <div>Wireless on/off switch</div> <div>Graphic Optimus/Integrated switch</div> <div>EPEAT™ Gold rating</div> <div>ENERGY STAR® qualified</div> <div>RoHS-compliant</div> <div>Limited Warranty¹² ⇨ 1-year parts and labor ⇨ Depot repair service¹⁹ ⇨ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686</div>				
Diskette drive	None															
SATA optical	<i>Some:</i> DVD burner, dual-layer support, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in															
SATA disk	750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high															
mSATA™ SSD	<i>Some:</i> 64GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot															
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy);															
Camera	LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator															
Discrete graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® GT 555M , PCI Express® x16, 1GB GDDR5 memory, DirectX® 11, NVIDIA CUDA™ technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector															
Keyboard	Full-size keyboard, 6-row, recovery key															
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control															
Numeric keypad	Numeric keypad on right of keyboard															
Light sensor	None															
Touch pad	Two-button touch pad with scroll feature, multi-touch															
Dimensions ³	(WxDxH): 15.2" x 10.0" x 0.9" to 1.4"; 385mm x 255mm x 22mm to 35.7mm															
Weight ²	with optical drive and battery: <i>6-cell:</i> 5.95 lb (2.7 kg)															
Case color	Dusk black top with texture, black bottom															
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic															
Battery - type	Lithium Ion 6-cell															
Battery - life ¹⁰	Up to 4 hr															
Chipset	Mobile Intel HM65 Express Chipset															
ExpressCard/34	None															
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)															
Ports	<i>Left side:</i> one USB 2.0 port and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45) <i>Right side:</i> two USB 3.0 ports															
TV tuner	None															
PCIe Mini Card	Three PCIe Mini Card slots															
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000															
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface															
Modem	None															
Ethernet	Gigabit ethernet, Broadcom® BCM57780/BCM57781, PCIe x1															
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / JBL® stereo speakers (1.5 watt x 2), SRS® Premium Sound™ / dual array microphone, microphone input jack (3.5 mm), headphone jack (S/PDIF-out) (stereo, 3.5 mm)															
Security	Hard disk password, administrator password, security lockhole															
Fingerprint reader	None															

See footnotes for important warranty information

US models announced November 2, 2011; previous models on July 6, 2011

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IdeaPad™ Y570 (0862) - NVIDIA (Windows 7) - web only models

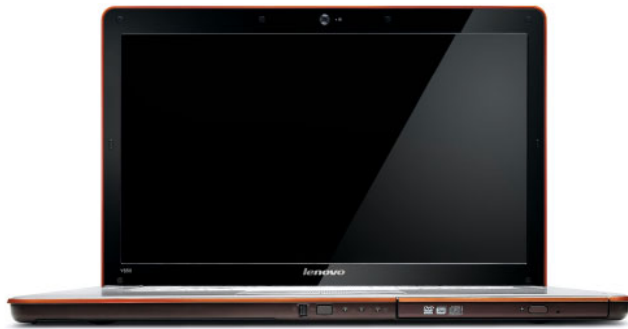
Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Discrete graphics	SATA disk GB ⁸ rpm	mSATA SSD	SATA optical	PCIe Mini Card 802.11	Top color	Blue-tooth	USB3.0 Conne-ctor	Win7 preload	Avail date
0862-24U	i5-2410M	2.30	2.90	4GBx1	15.6" HD	LED	GT 555M	500GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0862-25U	i5-2410M	2.30	2.90	2GBx2	15.6" HD	LED	GT 555M	750GB 5400		Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0862-26U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	GT 555M	500GB 7200		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0862-27U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	GT 555M	750GB 5400		Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0862-28U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	GT 555M	750GB 5400	64GB	Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0862-29U	i3-2310M	2.10		2GBx2	15.6" HD	LED	GT 555M	500GB 7200		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	May 11
0862-2RU	i3-2330M	2.20		4GBx1	15.6" HD	LED	GT 555M	500GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0862-2WU	i7-2670QM	2.20	3.10	4GBx2	15.6" HD	LED	GT 555M	750GB 5400		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0862-2UU	i7-2670QM	2.20	3.10	4GBx2	15.6" HD	LED	GT 555M	750GB 5400		Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0862-2VU	i7-2670QM	2.20	3.10	4GBx2	15.6" HD	LED	GT 555M	750GB 5400	64GB	Blu-ray	Intel 1000	Black	Blue	USB3.0	Prem 64	Nov 11
0862-68U	i5-2430M	2.40	3.00	4GBx1	15.6" HD	LED	GT 555M	500GB 7200		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Dec 11
0862-6JU	i7-2670QM	2.20	3.10	4GBx2	15.6" HD	LED	GT 555M	500GB 7200		DVD±RW	Intel 1000	Black	Blue	USB3.0	Prem 64	Dec 11
<ul style="list-style-type: none">• 15.6" widescreen, glossy display with LED backlight• Touch pad supports multi-touch function (pinch, expansion, chiral motion)• SRS Premium Sound audio system with two JBL® stereo speakers• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00 GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20 GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology											Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink PowerDVD (DVD±RW, Blu-ray)• Cyberlink Power2Go (DVD±RW, Blu-ray)• Lenovo DirectShare				
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											120-watt AC adapter Wireless on/off switch Graphic Optimus/Integrated switch EPEAT™ Gold rating ENERGY STAR® qualified RoHS-compliant				
SATA optical	Some: DVD burner, dual-layer support, 12.7mm high, tray-in Some: Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in															
SATA disk	500GB (5400 rpm), 500GB (7200 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high															
mSATA™ SSD	Some: 64GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot															
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio															
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator															
Discrete graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® GT 555M , PCI Express® x16, 1GB GDDR5 memory, DirectX® 11, NVIDIA CUDA™ technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector															
Keyboard	Full-size keyboard, 6-row, recovery key															
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control															
Numeric keypad	Numeric keypad on right of keyboard															
Light sensor	None															
Touch pad	Two-button touch pad with scroll feature, multi-touch															
Dimensions ³	(WxDxH): 15.2" x 10.0" x 0.9" to 1.4"; 385mm x 255mm x 22mm to 35.7mm															
Weight ²	with optical drive and battery: 6-cell : 5.95 lb (2.7 kg)															
Case color	Dusk black top with texture, black bottom															
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic															
Battery - type	Lithium Ion 6-cell															
Battery - life ¹⁰	Up to 4 hr															
Chipset	Mobile Intel HM65 Express Chipset															
ExpressCard/34	None															
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)															
Ports	Left side: one USB 2.0 port and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45) Right side: two USB 3.0 ports															
TV tuner	None															
PCIe Mini Card	Three PCIe Mini Card slots															
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000															
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface															
Modem	None															
Ethernet	Gigabit ethernet, Broadcom® BCM57780/BCM57781, PCIe x1															
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / JBL® stereo speakers (1.5 watt x 2), SRS® Premium Sound™ / dual array microphone, microphone input jack (3.5 mm), headphone jack (S/PDIF-out) (stereo, 3.5 mm)															
Security	Hard disk password, administrator password, security lockhole															
Fingerprint reader	None															
												Limited Warranty¹² ⇨ 1-year parts and labor ⇨ Depot repair service¹⁹ ⇨ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686				

See footnotes for important warranty information

US models announced December 21, 2011; previous models on May 18 or November 23, 2011

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Lenovo IdeaPad Y650



Lenovo IdeaPad Y650



Lenovo IdeaPad Y650



Lenovo IdeaPad Y650



Lenovo IdeaPad Y650



Lenovo IdeaPad Y650

Part number	Processor	GHz	Memory	Widescreen display	CCFL or LED	Camera	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Top color	Blue-tooth	ENERGY STAR 5.0	Vista preload	Avail date
59019001	P8600	2.40	4GB	16.0" WXGA	LED	Cam	GMA	320GB ⁸	DVD±RW	Intel 5100 ²⁸	Black	Blue	ES50	Prem 64	Apr 09
59018999	P8600	2.40	4GB	16.0" WXGA	LED	Cam	GMA	320GB	DVD±RW	Intel 5100	Black	Blue	ES50	Prem 64	May 09

- 16.0" widescreen, glossy display with LED backlight
- Lenovo® Desktop Navigator easily toggles between shortcuts, files, and other frequently used programs with touch-sensitive slide bar
- Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face.
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- Dolby® Home Theater® premium audio system with two JBL® stereo speakers
- Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ 2 Duo processor P8600 with dual-core , Intel HD Boost, 1066MHz system bus, and 3MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® Vista® Home Premium 64 ✧ Vista Premium logo Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • Norton Internet Security™ (90 days of virus definitions) • Adobe® Reader • Easy Capture • Microsoft® Office 2007 Trial (60-day) • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Media Show • Lenovo Desktop Navigator software
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available;		
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, tray-in 320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, removable		
Widescreen display Camera	16.0" (406.4mm) WXGA (1366x768) TFT color, VibrantView (glossy); LED backlight , 300 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator		
Integrated graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GM45, HDMI port supporting HDCP to output protected content		Available at these retailers • TigerDirect 65-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant Limited Warranty ¹² ⇨ 1-year parts and labor ⇨ Depot repair service ¹⁹ ⇨ Service upgrade options (in eligible locations): ⁹ • 1-year Onsite with accidental damage protection 78Y1533 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day 78Y1540 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Keyboard Touch controls Light sensor Touch pad	Full-size keyboard, 6-row, 84-key, recovery key, mute, vol up, vol down button Lenovo Desktop Navigator, OneKey Theater, and Dolby control center key Ambient light sensor Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 15.4" x 10.2" x 1.0"; 390mm x 260mm x 26mm with optical drive and battery: <i>6-cell</i> : 5.62 lb (2.55 kg) Black top with engraved pattern, black bottom <i>Top</i> : carbon fiber reinforced plastic; <i>Bottom</i> : magnesium-aluminum alloy Lithium Ion 6-cell Up to 3.5 hr		
Chipset	Mobile Intel GM45 Express Chipset (Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, ethernet MAC) One slot (ExpressCard/34)		
ExpressCard/34 Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)		
Ports	Two USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45), CIR, eSATA port		
TV tuner Mini PCI Express Intel 5100 ²⁸ Bluetooth™ Modem Ethernet Audio support	None Three Mini PCI Express slots 11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator None Gigabit ethernet, Broadcom® BCM5784, PCIe x1 High Definition (HD) Audio, RealTek® ALC272 codec / two JBL® stereo speakers (2 watt), Dolby® Home Theater™ Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (SPDIF-out) (stereo, 3.5 mm) Hard disk password, user password, supervisor password, security lockhole		
Security Fingerprint reader	None		

See footnotes for important warranty information

✧ Intel Centrino® 2 processor technology

Ⓢ US model announced May 27, 2009; previous models on April 7, 2009

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(BM1-3) May 2009

Type-model	Pro- cessor	GHz	Memory	Widescreen display	CCFL or LED	Cam- era	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Top color	Blue- tooth	ENERGY STAR 5.0	Vista preload	Avail date
4185-36U	P8600	2.40	3GB	16.0" WXGA	LED	Cam	GMA	320GB ⁸	DVD±RW	Intel 5100 ²⁸	Black	Blue	ES50	Prem 32	Feb 09
4185-56U	P8700	2.53	4GB	16.0" WXGA	CCFL	Cam	GMA	320GB	DVD±RW	Intel 5100	Black		ES50	Prem 64	Aug 09
4185-55U	P8700	2.53	4GB	16.0" WXGA	CCFL	Cam	GMA	320GB	DVD±RW	Intel 5100	Black		ES50	Prem 64	Aug 09
4185-75U	P8700	2.53	4GB	16.0" WXGA	CCFL	Cam	GMA	320GB	DVD±RW	Intel 5100	Black		ES50	Prem 64	Aug 09

- **16.0" widescreen, glossy display**
- **Lenovo® Desktop Navigator easily toggles between shortcuts, files, and other frequently used programs with touch-sensitive slide bar**
- **Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face.**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **Dolby® Home Theater® premium audio system with two JBL® stereo speakers**
- **Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ 2 Duo processor P8600 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache	Preloaded operating system²⁰ - Some: Genuine Windows® Vista® Home Premium 32 - Some: Genuine Windows Vista Home Premium 64 ♦ Vista Premium logo
Memory	3GB or 4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available;	Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • Norton Internet Security™ (90 days of virus definitions) • Adobe® Reader • Easy Capture • Microsoft® Office 2007 Trial (60-day) • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Media Show • Lenovo Desktop Navigator software
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, tray-in 320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, removable	Available at these retailers • lenovo.com
Widescreen display	16.0" (406.4mm) WXGA (1366x768) TFT color, VibrantView (glossy); <i>Some:</i> LED backlight , 300 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> CCFL backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator	65-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant
Camera	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GM45, HDMI port supporting HDCP to output protected content	Limited Warranty¹² ⇒ 1-year parts and labor ⇒ Depot repair service¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Onsite with accidental damage protection 78Y1533 • 3-year Lenovo Onsite Repair¹³ 9x5 Next Business Day 78Y1540 • 3-year Lenovo Onsite Repair¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
Keyboard	Full-size keyboard, 6-row, 84-key, recovery key, mute, vol up, vol down button	
Touch controls	Lenovo Desktop Navigator, OneKey Theater, and Dolby control center key	
Light sensor	Ambient light sensor	
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch	
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 15.4" x 10.2" x 1.0" to 1.2"; 390mm x 260mm x 26 to 30mm with optical drive and battery: 6-cell: 5.62 lb (2.55 kg) Black top, black bottom <i>Top:</i> carbon fiber reinforced plastic; <i>Bottom:</i> magnesium-aluminum alloy Lithium Ion 6-cell Up to 3.5 hr	
Chipset	Mobile Intel GM45 Express Chipset (Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, ethernet MAC)	
ExpressCard/34 Multicard reader	One slot (ExpressCard/34) 6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)	
Ports	Two USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45), CIR, eSATA port	
TV tuner	None	
Mini PCI Express	Three Mini PCI Express slots	
Intel 5100 ²⁸	11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)	
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator	
Modem	None	
Ethernet	Gigabit ethernet, Broadcom® BCM5784, PCIe x1	
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / two JBL stereo speakers (2 watt), Dolby Home Theater Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (SPDIF-out) (stereo, 3.5 mm)	
Security	Hard disk password, user password, supervisor password, security lockhole	
Fingerprint reader	None	

See footnotes for important warranty information

♦ Intel Centrino® 2 processor technology

Ⓜ US models announced August 19, 2009; previous models on February 24 or August 5, 2009

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(BM1-1) August 2009

Type-model	Pro- cessor	GHz	Memory	Widescreen display	CCFL or LED	Cam- era	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Top color	Blue- tooth	Win7 preload	Avail date
4185-57U	P8700	2.53	4GB	16.0" HD	CCFL	1.3M	GMA 4500MHD	500GB ⁸	DVD±RW	✚ Intel 5100 ²⁸	Black	None	Prem 64	Nov 09

- **16.0" widescreen, glossy display**
- **Lenovo® Desktop Navigator easily toggles among shortcuts, files, and other frequently used programs with touch-sensitive slide bar**
- **Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face.**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **Dolby® Home Theater® premium audio system with two JBL® stereo speakers**
- **Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ 2 Duo processor P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Easy Capture• Microsoft® Office 2007 Trial (60-day)• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Media Show• Lenovo Desktop Navigator software
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available;		
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, tray-in 500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, removable		
Widescreen display Camera	16.0" (406.4mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); CCFL backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator		
Integrated graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GM45, HDMI port supporting HDCP to output protected content		
Keyboard Touch controls Light sensor Touch pad	Full-size keyboard, 6-row, 84-key, recovery key, mute, vol up, vol down button Lenovo Desktop Navigator, OneKey Theater, and Dolby control center key Ambient light sensor Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		65-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 15.4" x 10.2" x 1.0" to 1.2"; 390mm x 260mm x 26 to 30mm with optical drive and battery: <i>6-cell</i> : 5.62 lb (2.55 kg) Black top, black bottom <i>Top</i> : carbon fiber reinforced plastic; <i>Bottom</i> : magnesium-aluminum alloy Lithium Ion 6-cell Up to 3.5 hr		
Chipset	Mobile Intel GM45 Express Chipset (Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, ethernet MAC)		
ExpressCard/34 Multicard reader	One slot (ExpressCard/34) 6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)		
Ports	Two USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45), CIR, eSATA port		
TV tuner Mini PCI Express Intel 5100 ²⁸ Bluetooth™ Modem Ethernet Audio support	None Three Mini PCI Express slots 11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) None None Gigabit ethernet, Broadcom® BCM5784, PCIe x1 High Definition (HD) Audio, RealTek® ALC272 codec / two JBL stereo speakers (2 watt), Dolby Home Theater Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (SPDIF-out) (stereo, 3.5 mm)		Limited Warranty ¹² ➤ 1-year parts and labor ➤ Depot repair service ¹⁹ ➤ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Onsite with accidental damage protection 78Y1533• 3-year Lenovo Onsite Repair¹³ 9x5 Next Business Day 78Y1540• 3-year Lenovo Onsite Repair¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ➤ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Security Fingerprint reader	Hard disk password, user password, supervisor password, security lockhole None		

See footnotes for important warranty information
US model announced November 3, 2009

✚ Intel Centrino® 2 processor technology

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(BM1-4) November 2009

Type-model	Processor	GHz	Memory	Widescreen display	CCFL or LED	Camera	Discrete graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Top color	Blue-tooth	Vista preload	Avail date
4185-37U	P8600	2.40	3GB	16.0" WXGA	LED	Cam	G105M	320GB ⁸	DVD±RW	Intel 5100 ²⁸	Black	Blue	Prem 64	Feb 09
4185-34U	P8700	2.53	4GB	16.0" WXGA	LED	Cam	G105M	320GB	DVD±RW	Intel 5100	Black	Blue	Prem 64	Feb 09

- 16.0" widescreen, glossy display with LED backlight
- Lenovo® Desktop Navigator easily toggles between shortcuts, files, and other frequently used programs with touch-sensitive slide bar
- Integrated 1.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face.
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- Dolby® Home Theater® premium audio system with two JBL® stereo speakers
- Ambient Light Sensor automatically adjusts screen brightness based on surrounding light conditions
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ 2 Duo processor P8600 or P8700 with dual-core , Intel HD Boost, 1066MHz system bus, and 3MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® Vista® Home Premium 64 ♦ Vista Premium logo Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • Norton Internet Security™ (90 days of virus definitions) • Adobe® Reader • Easy Capture • Microsoft® Office 2007 Trial (60-day) • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Media Show • Lenovo Desktop Navigator software
Memory	3GB or 4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available;		
Diskette drive	None		Available at these retailers • lenovo.com
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 9.5 mm high, tray-in		
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, removable		90-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant
Widescreen display	16.0" (406.4mm) WXGA (1366x768) TFT color, VibrantView (glossy); LED backlight , 300 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator		Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Depot repair service ¹⁹ ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Onsite with accidental damage protection 78Y1533 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day 78Y1540 • 3-year Lenovo Onsite Repair ¹³ 9x5 Next Business Day with accidental damage protection 78Y1541 ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Discrete graphics	NVIDIA® GeForce® G105M , PCI Express® x16, 256MB memory, DirectX® 10, PureVideo® HD technology, VGA, HDMI, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, 84-key, recovery key, mute, vol up, vol down button		See footnotes for important warranty information US models announced February 24, 2009
Touch controls	Lenovo Desktop Navigator, OneKey Theater, and Dolby control center key		
Light sensor	Ambient light sensor		© Lenovo (BM1-2) February 2009
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	(WxDxH): 15.4" x 10.2" x 1.0"; 390mm x 260mm x 26mm		♦ Intel Centrino® 2 processor technology
Weight ²	with optical drive and battery: 6-cell: 5.62 lb (2.55 kg)		
Case color	Black top with engraved pattern, black bottom		See footnotes for important warranty information US models announced February 24, 2009
Case material	Top: carbon fiber reinforced plastic; Bottom: magnesium-aluminum alloy		
Battery - type	Lithium Ion 6-cell		See footnotes for important warranty information US models announced February 24, 2009
Battery - life ¹⁰	Up to 2.5 hr		
Chipset	Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, ethernet MAC)		See footnotes for important warranty information US models announced February 24, 2009
ExpressCard/34	One slot (ExpressCard/34)		
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)		See footnotes for important warranty information US models announced February 24, 2009
Ports	Two USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45), CIR, eSATA port		
TV tuner	None		See footnotes for important warranty information US models announced February 24, 2009
Mini PCI Express	Three Mini PCI Express slots		
Intel 5100 ²⁸	11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)		See footnotes for important warranty information US models announced February 24, 2009
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator		
Modem	None		See footnotes for important warranty information US models announced February 24, 2009
Ethernet	Gigabit ethernet, Broadcom® BCM5784, PCIe x1		
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / two JBL® stereo speakers (2 watt), Dolby® Home Theater™ Speaker System / dual array microphone, microphone input jack (3.5 mm), headphone jack (SPDIF-out) (stereo, 3.5 mm)		
Security	Hard disk password, user password, supervisor password, security lockhole		See footnotes for important warranty information US models announced February 24, 2009
Fingerprint reader	None		

See footnotes for important warranty information
US models announced February 24, 2009

♦ Intel Centrino® 2 processor technology

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(BM1-2) February 2009



Lenovo IdeaPad Z360



Lenovo IdeaPad Z360



Lenovo IdeaPad Z360



Lenovo IdeaPad Z360



Lenovo IdeaPad Z360



Lenovo IdeaPad Z360

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam-era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Bluetooth	Win7 preload	Avail date
0912-33U	i3-350M	2.26		3GB	13.3" HD	LED	1.3M	Intel HD	500GB ⁸	DVD±RW	WiMAX	Black	Bluetooth	Prem 64	Jul 10
0912-34U	i3-370M	2.40		3GB	13.3" HD	LED	1.3M	Intel HD	500GB	DVD±RW	WiMAX	Black	Bluetooth	Prem 32	Dec 10
0912-36U	i5-460M	2.53	2.80	4GB	13.3" HD	LED	1.3M	Intel HD	500GB	DVD±RW	WiMAX	Black	Bluetooth	Prem 64	Dec 10
0912-37U	i5-480M	2.66	2.93	4GB	13.3" HD	LED	1.3M	Intel HD	500GB	DVD±RW	WiMAX	Black	Bluetooth	Prem 64	Mar 11
0912-38U	i3-380M	2.53		3GB	13.3" HD	LED	1.3M	Intel HD	500GB	DVD±RW	WiMAX	Black	Bluetooth	Prem 32	Mar 11

- **13.3" widescreen, glossy display with LED backlight**
- **Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby Advanced Audio certified audio system**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-350M, i3-370M, or i3-380M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or Intel Core i5 processor i5-460M or i5-480M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 32 - Some: Genuine Windows 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essential • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo DirectShare				
Memory	3GB or 4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available														
Diskette drive	None														
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in														
SATA disk	500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high														
Widescreen display	13.3" (337.8mm) HD (WXGA1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio														
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator														
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant														
Keyboard	Full-size keyboard, 6-row, recovery button														
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management														
Light sensor	None														
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)														
Dimensions ³	(WxDxH): 12.9" x 8.6" x 0.8" to 1.3"; 327mm x 219mm x 20mm to 34mm														
Weight ²	with optical drive and battery: <i>6-cell</i> : 4.41 lb (2.0kg)														
Case color	Black top, black bottom														
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic														
Battery - type	Lithium Ion 6-cell														
Battery - life ¹⁰	Up to 5 hr														
Chipset	Mobile Intel HM55 Express Chipset														
ExpressCard/34	None														
Multicard reader	4-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card)														
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner	None														
PCIe Mini Card	One PCIe Mini Card slot														
WiMAX	11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX														
Bluetooth™	Bluetooth 2.1 wireless, internal USB 2.0 interface														
Modem	None														
Ethernet	10/100M ethernet, Atheros® AR8152														
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / stereo speakers (2 watt x 2), Dolby® Advanced Audio™ certified / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)														
Security	User password, hard disk password, supervisor password, security lockhole														
Fingerprint reader	None														

See footnotes for important warranty information

US models announced March 2, 2011; previous models on May 12 or December 1, 2010

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(LL71-1) March 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Discrete graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
0912-32U	i5-450M	2.40	2.66	4GB	13.3" HD	LED	1.3M	GF 310M 512MB	500GB ⁸	DVD±RW	WiMAX	Black	Blue	Prem 64	Jul 10
0912-35U	i5-560M	2.66	3.20	4GB	13.3" HD	LED	1.3M	GF 310M 1GB	500GB	DVD±RW	WiMAX	Black	Blue	Prem 64	Dec 10

- 13.3" widescreen, glossy display with LED backlight
- Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Dolby® Advanced Audio™ certified audio system
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5 processor i5-450M or i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64	
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available		Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essential • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo DirectShare	
Diskette drive	None		65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant	
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in			
SATA disk	500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high			
Widescreen display	13.3" (337.8mm) HD (WXGA1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator			
Discrete graphics	NVIDIA® GeForce® 310M , PCI Express® x16, 512MB or 1GB memory, DirectX® 10.1, NVIDIA PureVideo® HD technology, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant			
Keyboard	Full-size keyboard, 6-row, recovery button		Limited Warranty ¹² ⇨ 1-year warranty ⇨ Mail in repair service ⇨ Service upgrade options (in eligible locations): ⁹ • 1-year Lenovo Onsite Repair ¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair ¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management			
Light sensor	None			
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)			
Dimensions ³	(WxDxH): 12.9" x 8.6" x 0.8" to 1.3"; 327mm x 219mm x 20mm to 34mm			
Weight ²	with optical drive and battery: 6-cell: 4.41 lb (2.0kg)			
Case color	Black top, black bottom			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	Up to 4.5 hr			
Chipset	Mobile Intel HM55 Express Chipset			
ExpressCard/34	None			
Multicard reader	4-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card)			
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	One PCIe Mini Card slot			
WiMAX	11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX			
Bluetooth™	Bluetooth 2.1 wireless, internal USB 2.0 interface			
Modem	None			
Ethernet	10/100M ethernet, Atheros® AR8152			
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / stereo speakers (2 watt x 2), Dolby Advanced Audio™ certified / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)			
Security	User password, hard disk password, supervisor password, security lockhole			
Fingerprint reader	None			

See footnotes for important warranty information

US model announced December 1, 2010; previous model on May 12, 2010

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(LL71-2) March 2011



Lenovo IdeaPad Z370 (black)



Lenovo IdeaPad Z370 (blue)



Lenovo IdeaPad Z370 (blue)



Lenovo IdeaPad Z370 (black)



Lenovo IdeaPad Z370 (black)



Lenovo IdeaPad Z370 (black)

IdeaPad™ Z370 (1025) - Integrated (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Bluetooth	Win7 preload	Avail date
1025-26U	i5-2410M	2.30	2.90	2GBx2	13.3" HD	LED	0.3M	Intel HD	500GB ⁸	DVD±RW	Intel 1000	Black	Bluetooth	Prem 64	Jul 11
1025-27U	i3-2310M	2.10		2GBx2	13.3" HD	LED	0.3M	Intel HD	320GB	DVD±RW	Intel 1000	Black	Bluetooth	Prem 64	Jul 11
1025-2EU	i3-2330M	2.20		4GBx1	13.3" HD	LED	0.3M	Intel HD	320GB	DVD±RW	Intel 1000	Black	Bluetooth	Prem 64	Nov 11
1025-2DU	i5-2430M	2.40	3.00	4+2GB	13.3" HD	LED	0.3M	Intel HD	500GB	DVD±RW	Intel 1000	Black	Bluetooth	Prem 64	Nov 11

- **13.3" widescreen, glossy display with LED backlight**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo DirectShare
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Diskette drive	None	
SATA optical	DVD burner, dual-layer support, 12.7mm high, tray-in	
SATA disk	320GB (5400 rpm) or 500GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high	
Widescreen display	13.3" (337.8mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant	
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key	
Numeric keypad	None	
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control	
Light sensor	None	
Touch pad	One-piece touch pad with scroll feature, multi-touch	
Dimensions ³	(WxDxH): 12.9" x 8.7" x 0.8" to 1.3"; 328mm x 222mm x 20mm to 33mm	
Weight ²	with optical drive and battery: <i>6-cell</i> : 4.41lb (2.0 kg)	
Case color	Black top, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>Integrated:</i> up to 5 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	None	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)	
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
TV tuner	None	
PCIe Mini Card	One PCIe Mini Card slot	
11b/g/n	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000	
Bluetooth™	Bluetooth 2.1 wireless + EDR	
Modem	None	
Ethernet	10/100M ethernet, Realtek® RTL8105E	
Audio support	High Definition (HD) Audio, RealTek® ALC269Q-VB codec / SRS® Premium Sound™, stereo speakers (1.5 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)	
Security	Hard disk password, user password, administrator password, security lockhole	
Fingerprint reader	None	

| 65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant | |
| **Limited Warranty**¹² ↪ **1-year warranty** ↪ **Mail In repair service** ↪ **Service upgrade options**⁵⁸ (in eligible locations):⁹ - **1-year Lenovo Onsite Repair**¹³ 78Y1532 - **1-year Onsite with accidental damage protection** 78Y1533 - **2-year Lenovo Onsite Repair**¹³ 78Y1536 - **3-year Lenovo Depot Repair** 78Y1538 ↪ **24x7**¹⁶ **toll-free support for warranty issues during the warranty period**¹² **via 877-453-6686** | |

See footnotes for important warranty information

⚡ US models announced November 2, 2011; previous models on July 6, 2011

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(GIN1-3) November 2011

IdeaPad™ Z370 (1025) - Integrated (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Bluetooth	Win7 preload	Avail date
1025-22U	i5-2410M	2.30	2.90	2GBx2	13.3" HD	LED	2.0M	Intel HD	500GB ⁸	DVD±RW	11b/g/n	Black	Bluetooth	Prem 64	Mar 11
1025-23U	i3-2310M	2.10		2GBx2	13.3" HD	LED	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Black	Bluetooth	Prem 64	Mar 11
1025-25U	i5-2410M	2.30	2.90	2GBx2	13.3" HD	LED	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Blue	Bluetooth	Prem 64	Mar 11
1025-2UU	B800	1.50		4GBx1	13.3" HD	LED	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Black	Bluetooth	Prem 64	Dec 11
1025-2VU	i3-2330M	2.20		4GBx1	13.3" HD	LED	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Black	Bluetooth	Prem 64	Dec 11

- **13.3" widescreen, glossy display with LED backlight**
- **Integrated 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Celeron® B800 processor (dual-core, 1.50GHz, 2MB cache) , DDR3 memory controller (up to 1333MHz) Intel Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo DirectShare
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Diskette drive	None		
SATA optical	DVD burner, dual-layer support, 12.7mm high, tray-in		
SATA disk	500GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high		
Widescreen display	13.3" (337.8mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator		
Graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector		
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key		
Numeric keypad	None		
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control		
Light sensor	None		65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Touch pad	One-piece touch pad with scroll feature, multi-touch		
Dimensions ³	(WxDxH): 12.9" x 8.7" x 0.8" to 1.3"; 328mm x 222mm x 20mm to 33mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : 4.41lb (2.0 kg)		
Case color	Black or blue top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	<i>Integrated:</i> up to 5 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCIe Mini Card slot		
11b/g/n	<i>Some:</i> 11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® or Atheros® chip, 1x1		
Intel 1000	<i>Some:</i> 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000		
Bluetooth™	Bluetooth 2.1 wireless + EDR		
Modem	None		
Ethernet	10/100M ethernet, Realtek® RTL8105E		
Audio support	High Definition (HD) Audio, RealTek® ALC269Q-VB codec / SRS® Premium Sound™, stereo speakers (1.5 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		
Security	Hard disk password, user password, administrator password, security lockhole		
Fingerprint reader	None		

- Limited Warranty¹²**
- ⇒ **1-year warranty**
 - ⇒ **Mail in repair service**
 - ⇒ **Service upgrade options⁵⁸** (in eligible locations):⁹
 - **1-year Lenovo Onsite Repair¹³** 78Y1532
 - **1-year Onsite with accidental damage protection** 78Y1533
 - **2-year Lenovo Onsite Repair¹³** 78Y1536
 - **3-year Lenovo Depot Repair** 78Y1538
 - ⇒ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**

See footnotes for important warranty information

US models announced December 21, 2011; previous models on March 23, 2011

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(GIN1-1) December 2011

IdeaPad™ Z370 (1025) - Optimus (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Bluetooth	Win7 preload	Avail date
1025-24U	i5-2520M	2.50	3.20	2+4GB	13.3" HD	LED	2.0M	GF 410M	750GB ⁸	DVD±RW	11b/g/n	Black	Bluetooth	Prem 64	Mar 11

- **13.3" widescreen, glossy display with LED backlight**
- **Integrated 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live™ Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo DirectShare
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Diskette drive	None	
SATA optical	DVD burner, dual-layer support, 12.7mm high, tray-in	
SATA disk	750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high	
Widescreen display	13.3" (337.8mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® 410M , PCI Express® x16, 1GB memory, DirectX® 11, NVIDIA PureVideo® HD technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector	
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key	
Numeric keypad	None	
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control	
Light sensor	None	
Touch pad	One-piece touch pad with scroll feature, multi-touch	
Dimensions ³	(WxDxH): 12.9" x 8.7" x 0.8" to 1.3"; 328mm x 222mm x 20mm to 33mm	90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	with optical drive and battery: <i>6-cell</i> : 4.41lb (2.0 kg)	
Case color	Black top, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>Discrete with Optimus:</i> up to 4.5 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	None	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)	
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
TV tuner	None	Limited Warranty ¹² ⇒ 1-year warranty ⇒ Mail in repair service ⇒ Service upgrade options ⁵⁸ (in eligible locations): ⁹ • 1-year Lenovo Onsite Repair ¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair ¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
PCIe Mini Card	One PCIe Mini Card slot	
11b/g/n	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® or Atheros® chip, 1x1	
Bluetooth™	Bluetooth 2.1 wireless + EDR	
Modem	None	
Ethernet	10/100M ethernet, Realtek® RTL8105E	
Audio support	High Definition (HD) Audio, RealTek® ALC269Q-VB codec / SRS® Premium Sound™, stereo speakers (1.5 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)	
Security	Hard disk password, user password, administrator password, security lockhole	
Fingerprint reader	None	

See footnotes for important warranty information
US model announced March 23, 2011

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Lenovo IdeaPad Z460



Lenovo IdeaPad Z460



Lenovo IdeaPad Z460



Lenovo IdeaPad Z560



Lenovo IdeaPad Z560



Lenovo IdeaPad Z460

Type-model	Pro- cessor	GHz	Memory	Widescreen display	CCFL or LED	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Bluetooth	Win7 preload	Avail date
0913-32U	i3-330M	2.13	3GB	14.0" WXGA	LED	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	None	Prem 32	May 10
<ul style="list-style-type: none">• 14.0" widescreen, glossy display with LED backlight• Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face• Dolby® Advanced Audio™ certified audio system• Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows• OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-330M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 32			
Memory	3GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available										Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo DirectShare			
Diskette drive	None										65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant			
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in													
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high													
Widescreen display	14.0" (355.6mm) HD (WXGA1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator													
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant										Limited Warranty¹² ⇨ 1-year warranty ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686			
Keyboard	Full-size keyboard, 6-row, recovery button													
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management													
Light sensor	None													
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)													
Dimensions ³	(WxDxH): 13.4" x 9.1" x 0.7" to 1.4"; 340mm x 231.8mm x 17.2mm to 34.4mm										Limited Warranty¹² ⇨ 1-year warranty ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686			
Weight ²	with optical drive and battery: <i>6-cell</i> : 4.85 lb (2.2 kg)													
Case color	Black top, black bottom													
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic													
Battery - type	Lithium Ion 6-cell													
Battery - life ¹⁰	Up to 4 hr													
Chipset	Mobile Intel HM55 Express Chipset										Limited Warranty¹² ⇨ 1-year warranty ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686			
ExpressCard/34	One slot (ExpressCard/34)													
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)													
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
TV tuner	None													
PCIe Mini Card	Two PCIe Mini Card slots										Limited Warranty¹² ⇨ 1-year warranty ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® chip or Atheros chip													
Bluetooth™	None													
Modem	None													
Ethernet	10/100M ethernet, Realtek® RTL8103EL													
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2), Dolby Advanced Audio certification / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)													
Security	User password, hard disk password, supervisor password, security lockhole										Limited Warranty¹² ⇨ 1-year warranty ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686			
Fingerprint reader	None													

See footnotes for important warranty information
 US model announced May 12, 2010

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 (EFL3-1) March 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
0914-32U	i3-330M	2.13		3GB	15.6" HD	LED	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	None	Prem 64	May 10
0914-38U	i3-350M	2.26		4GB	15.6" HD	LED	1.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black	None	Prem 64	May 10
0914-37U	i5-450M	2.40	2.66	4GB	15.6" HD	LED	1.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black	None	Prem 64	May 10
0914-3NU	i3-370M	2.40		4GB	15.6" HD	LED	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	None	Prem 64	Aug 10
0914-3YU	i5-480M	2.66	2.93	4GB	15.6" HD	LED	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black (Matte)	None	Prem 64	Feb 11
0914-3ZU	i3-380M	2.53		4GB	15.6" HD	LED	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black (Matte)	None	Prem 64	Feb 11
0914-4DU	i3-380M	2.53		4GB	15.6" HD	LED	0.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black (Matte)	None	Prem 64	Feb 11
0914-4EU	P6200	2.13		4GB	15.6" HD	LED	0.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black (Matte)	None	Prem 64	Feb 11

- 15.6" widescreen, glossy display with LED backlight
- Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Dolby® Advanced Audio™ certified audio system
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Pentium® processor P6200 with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), and 3MB cache or Intel Core™ i3 processor i3-330M, i3-350M, i3-370M, or i3-380M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or Intel Core i5 processor i5-450M or i5-480M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none"> • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essential • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo DirectShare 				
Memory	3GB or 4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available														
Diskette drive	None														
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in														
SATA disk	320GB (5400 rpm) or 500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high														
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio														
Camera	Camera on top of screen, 0.3-megapixel or 1.3-megapixel, fixed focus, LED indicator														
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant														
Keyboard	Full-size keyboard, 6-row, recovery button														
Numeric keypad	Numeric keypad on right of keyboard														
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management														
Light sensor	None														
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)														
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.7" to 1.4"; 376.8mm x 249.8mm x 17.3mm to 34.9mm														
Weight ²	with optical drive and battery: <i>6-cell</i> : 5.73 lb (2.6 kg)														
Case color	Black or Black (Matte) top, black bottom														
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic														
Battery - type	Lithium Ion 6-cell														
Battery - life ¹⁰	Up to 4 hr														
Chipset	Mobile Intel HM55 Express Chipset														
ExpressCard/34	One slot (ExpressCard/34)														
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)														
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner	None														
PCIe Mini Card	Two PCIe Mini Card slots														
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® chip or Atheros® chip														
Bluetooth™	None														
Modem	None														
Ethernet	10/100M ethernet, Realtek® RTL8103EL														
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2), Dolby Advanced Audio certified / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)														
Security	User password, hard disk password, supervisor password, security lockhole														
Fingerprint reader	None														

See footnotes for important warranty information

US models announced February 16, 2011; previous models on May 12 or August 25, 2010

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(EFL4-1) March 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
0914-3AU	i3-350M	2.26		3GB	15.6" HD	LED	1.3M	Intel HD	500GB ⁸	DVD±RW	11b/g/n ²⁸	Black	Blue	Prem 64	May 10
0914-3DU	i3-350M	2.26		3GB	15.6" HD	LED	1.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black	Blue	Prem 64	May 10
0914-3EU	i5-450M	2.40	2.66	4GB	15.6" HD	LED	1.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	Blue	Prem 64	May 10
0914-3JU	i3-370M	2.40		3GB	15.6" HD	LED	1.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black	Blue	Prem 32	Dec 10
0914-3LU	i5-460M	2.53	2.80	4GB	15.6" HD	LED	1.3M	Intel HD	500GB	DVD±RW	Intel 1000 ²⁸	Black	Blue	Prem 64	Dec 10
0914-3MU	i3-370M	2.40		4GB	15.6" HD	LED	1.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	Blue	Prem 64	Dec 10
0914-3PU	i5-460M	2.53	2.80	4GB	15.6" HD	LED	1.3M	Intel HD	750GB	DVD±RW	Intel 1000	Black	Blue	Prem 64	Dec 10
0914-43U	i3-380M	2.53		4GB	15.6" HD	LED	1.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	Blue	Prem 64	Mar 11
0914-46U	i5-480M	2.66	2.93	4GB	15.6" HD	LED	1.3M	Intel HD	500GB	DVD±RW	Intel 1000	Black	Blue	Prem 64	Mar 11

- 15.6" widescreen, glossy display with LED backlight
- Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Dolby Advanced Audio certified audio system
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-350M, i3-370M, or i3-380M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or Intel Core i5 processor i5-450M, i5-460M, or i5-480M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache										Preloaded operating system ²⁰ - Some: Genuine Windows® 7 Home Premium 32 - Some: Genuine Windows 7 Home Premium 64				
Memory	3GB or 4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available										Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essential • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo DirectShare				
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 320GB (5400 rpm), 500GB (5400 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high														
Widescreen display Camera	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator														
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant														
Keyboard Numeric keypad Touch controls	Full-size keyboard, 6-row, recovery button Numeric keypad on right of keyboard Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management														
Light sensor Touch pad	None Two-button touch pad with scroll feature (no TrackPoint®)														
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 14.8" x 9.8" x 0.7" to 1.4"; 376.8mm x 249.8mm x 17.3mm to 34.9mm with optical drive and battery: 6-cell: 5.73 lb (2.6 kg) Black top, black bottom Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Lithium Ion 6-cell Up to 4 hr										65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant				
Chipset ExpressCard/34 Multicard reader	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)														
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner PCIe Mini Card 11b/g/n ²⁸ Intel 1000 ²⁸ Bluetooth™ Modem Ethernet Audio support	None Two PCIe Mini Card slots Some: 11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® chip or Atheros® chip Some: 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000 Bluetooth 2.1 wireless, LED indicator None 10/100M ethernet, Realtek® RTL8103EL High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2), Dolby® Advanced Audio™ certification / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)														
Security Fingerprint reader	User password, hard disk password, supervisor password, security lockhole None														

See footnotes for important warranty information

US models announced March 2, 2011; previous models on May 12 or December 1, 2010

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(EFL4-2) March 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Discrete graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
0914-39U	i3-350M	2.26	2.53	4GB	15.6" WXGA	LED	1.3M	GF 310M	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	None	Prem 64	May 10
0914-33U	i5-430M	2.26	2.53	4GB	15.6" WXGA	LED	1.3M	GF 310M	320GB	DVD±RW	11b/g/n	Black	None	Prem 64	May 10

- **15.6" widescreen, glossy display with LED backlight**
- **Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Advanced Audio™ certified audio system**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-350M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or Intel Core i5 processor i5-430M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essential• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo DirectShare	
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available		65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant	
Diskette drive	None			
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in			
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high			
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator			
Discrete graphics	NVIDIA® GeForce® G310M , PCI Express® x16, 512MB memory, DirectX® 10.1, NVIDIA PureVideo® HD technology, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant			
Keyboard	Full-size keyboard, 6-row, recovery button			
Numeric keypad	Numeric keypad on right of keyboard			
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management			
Light sensor	None			
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)			
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.7" to 1.4"; 376.8mm x 249.8mm x 17.3mm to 34.9mm			
Weight ²	with optical drive and battery: <i>6-cell</i> : 5.73 lb (2.6 kg)			
Case color	Black top, black bottom			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	Up to 3.5 hr			
Chipset	Mobile Intel HM55 Express Chipset			
ExpressCard/34	One slot (ExpressCard/34)			
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)			
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	Two PCIe Mini Card slots			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® chip or Atheros chip			
Bluetooth™	None			
Modem	None			
Ethernet	10/100M ethernet, Realtek® RTL8103EL			
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2), Dolby Advanced Audio certification / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)			
Security	User password, hard disk password, supervisor password, security lockhole			
Fingerprint reader	None			

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See footnotes for important warranty information
 US models announced May 12, 2010

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 (EFL4-3) March 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Discrete graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload	Avail date
0914-3BU	i5-540M	2.53	3.06	4GB	15.6" HD	LED	1.3M	GF 310M 512MB	500GB ⁸	DVD±RW	Intel 1000 ²⁸	Black	Blue	Prem 64	May 10
0914-3KU	i5-460M	2.53	2.80	4GB	15.6" HD	LED	1.3M	GF 310M 512MB	500GB	DVD±RW	Intel 1000	Black	Blue	Prem 64	Dec 10
0914-3HU	i5-460M	2.53	2.80	4GB	15.6" HD	LED	1.3M	GF 310M 1GB	500GB	DVD±RW	Intel 1000	Black	Blue	Prem 64	Dec 10
0914-48U	i5-480M	2.66	2.93	4GB	15.6" HD	LED	1.3M	GF 310M 1GB	500GB	DVD±RW	Intel 1000	Black	Blue	Prem 64	Feb 11

- **15.6" widescreen, glossy display with LED backlight**
- **Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Advanced Audio™ certified audio system**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5 processor i5-460M, i5-480M, or i5-540M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essential• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo DirectShare
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available		
Diskette drive	None		
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in		
SATA disk	500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high		
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, LED indicator		
Discrete graphics	NVIDIA® GeForce® 310M , PCI Express® x16, 512MB or 1GB memory, DirectX® 10.1, NVIDIA PureVideo® HD technology, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, recovery button		
Numeric keypad	Numeric keypad on right of keyboard		
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management		
Light sensor	None		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)		
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.7" to 1.4"; 376.8mm x 249.8mm x 17.3mm to 34.9mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : 5.73 lb (2.6 kg)		
Case color	Black top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	Up to 3.5 hr		
Chipset	Mobile Intel HM55 Express Chipset		
ExpressCard/34	One slot (ExpressCard/34)		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Two PCIe Mini Card slots		
Intel 1000 ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
Bluetooth™	Bluetooth 2.1 wireless, LED indicator		
Modem	None		
Ethernet	10/100M ethernet, Realtek® RTL8103EL		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2), Dolby Advanced Audio certification / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		
Security	User password, hard disk password, supervisor password, security lockhole		
Fingerprint reader	None		

Limited Warranty ¹²	
⇨ 1-year warranty	
⇨ Mail In repair service	
⇨ Service upgrade options (in eligible locations): ⁹	
• 1-year Lenovo Onsite Repair ¹³ 78Y1532	
• 1-year Onsite with accidental damage protection 78Y1533	
• 2-year Lenovo Onsite Repair ¹³ 78Y1536	
• 3-year Lenovo Depot Repair 78Y1538	
⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	

See footnotes for important warranty information

Ⓜ US model announced February 16, 2011; previous model on May 12 or December 1, 2010

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Type-model	Pro-processor	GHz	Cores	Memory	Widescreen display	CCFL or LED	Cam-era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Ethernet	Blue-tooth	Win7 preload	Avail date
4311-35U	N530	2.50	2	4GB	15.6" HD	LED	1.3M	HD 4270	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	1000M	None	Prem 64	Jul 10
4311-36U	N830	2.10	3	4GB	15.6" HD	LED	1.3M	HD 4270	320GB	DVD±RW	11b/g/n	Black	1000M	None	Prem 64	Jul 10
4311-3CU	P540	2.40	2	4GB	15.6" HD	LED	0.3M	HD 4270	500GB	Blu-ray	11b/g/n	Black	100M	None	Prem 64	Aug 10
4311-3DU	P540	2.40	2	4GB	15.6" HD	LED	0.3M	HD 4270	500GB	DVD±RW	11b/g/n	Black	100M	None	Prem 64	Aug 10
4311-3HU	P560	2.50	2	4GB	15.6" HD	LED	0.3M	HD 4270	320GB	DVD±RW	11b/g/n	Black	1000M	None	Prem 64	Mar 11
4311-3JU	P560	2.50	2	4GB	15.6" HD	LED	0.3M	HD 4270	500GB	DVD±RW	11b/g/n	Black	100M	None	Prem 64	Mar 11

- 15.6" widescreen, glossy display with LED backlight
- Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Dolby Advanced Audio certified audio system
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle AMD® Turion™ II Dual-Core Mobile processor N530, P540, or P560 with dual-core, integrated DDR3 memory controller, and 2MB L2 cache or AMD Phenom™ II Triple-Core Mobile processor N830 with triple-core, integrated DDR3 memory controller, and 1.5MB L2 cache											Preloaded operating system²⁰ - Genuine Windows 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo DirectShare				
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available															
Diskette drive	None															
SATA optical	<i>Some:</i> DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in															
SATA disk	320GB (5400 rpm) or 500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high															
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio															
Camera	Camera on top of screen, 0.3-megapixel or 1.3-megapixel, fixed focus, LED indicator															
Integrated graphics	ATI™ Mobility Radeon™ HD 4270 Graphics , in M880G, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant															
Keyboard	Full-size keyboard, 6-row, recovery button															
Numeric keypad	Numeric keypad on right of keyboard															
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management															
Light sensor	None															
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)															
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.7" to 1.4"; 376.8mm x 249.8mm x 17.3mm to 34.9mm															
Weight ²	with optical drive and battery: 6-cell: 5.73 lb (2.6 kg)															
Case color	Black top, black bottom															
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic															
Battery - type	Lithium Ion 6-cell															
Battery - life ¹⁰	Up to 4 hr															
Chipset	AMD M880G Chipset , SB820M south bridge															
ExpressCard/34	One slot (ExpressCard/34)															
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)															
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)															
TV tuner	None															
PCIe Mini Card	Two PCIe Mini Card slots															
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® chip or Atheros® chip															
Bluetooth™	None															
Modem	None															
Ethernet	<i>Some:</i> 10/100M ethernet, Atheros AR8152 <i>Some:</i> Gigabit ethernet, Atheros AR8151															
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2), Dolby® Advanced Audio™ certified / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)															
Security	User password, hard disk password, supervisor password, security lockhole															
Fingerprint reader	None															

See footnotes for important warranty information

US models announced March 9, 2011; previous models on July 7 or August 25, 2010

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Type-model	Pro- cessor	GHz	Cores	Memory	Widescreen display	CCFL or LED	Cam- era	Discrete graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Numeric Keypad	Blue- tooth	Win7 preload	Avail date
4311-37U	P520	2.30	2	4GB	15.6" HD	LED	0.3M	HD 5470	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	Keypad	None	Prem 64	Jul 10
4311-34U	N530	2.50	2	4GB	15.6" HD	LED	0.3M	HD 5470	320GB	DVD±RW	11b/g/n	Black	Keypad	None	Prem 64	Jul 10

- 15.6" widescreen, glossy display with LED backlight
- Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Dolby® Advanced Audio™ certified audio system
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle AMD® Turion™ II Dual-Core Mobile processor P520 or N530 with dual-core, integrated DDR3 memory controller, and 2MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo DirectShare
Memory	4GB std / 8GB max ⁷ ; PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available		
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high		
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator		
Discrete graphics	ATI™ Mobility Radeon™ HD 5470 , PCI Express® x16, 512MB memory, DirectX® 11, ATI Avivo™ HD, VGA connector, HDMI connector, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, recovery button		
Numeric keypad	Numeric keypad on right of keyboard		
Touch controls	Touch-sensitive buttons for mute, OneKey Theater, Smart noise control, and Energy Management		
Light sensor	None		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)		
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.7" to 1.4"; 376.8mm x 249.8mm x 17.3mm to 34.9mm		
Weight ²	with optical drive and battery: 6-cell: 5.73 lb (2.6 kg)		
Case color	Black top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	Up to 3.5 hr		
Chipset	AMD M880G Chipset , SB820M south bridge		
ExpressCard/34	One slot (ExpressCard/34)		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Two USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		Limited Warranty ¹² ⇨ 1-year warranty ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations): ⁹ • 1-year Lenovo Onsite Repair ¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair ¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
TV tuner	None		
PCIe Mini Card	Two PCIe Mini Card slots		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® chip or Atheros chip		
Bluetooth™	None		
Modem	None		
Ethernet	Gigabit ethernet, Atheros AR8151		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2), Dolby Advanced Audio™ certified / microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		
Security	User password, hard disk password, supervisor password, security lockhole		
Fingerprint reader	None		

See footnotes for important warranty information
US models announced July 7, 2010

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ideapad



Lenovo IdeaPad Z470



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Lenovo IdeaPad Z470

IdeaPad™ Z470 (1022) - Integrated (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	Top color	Blue-tooth	Win7 preload	Avail date
1022-45U	i5-2410M	2.30	2.90	4GBx2	14.0" HD	LED	2.0M	Intel HD	750GB 5400	Blu-ray	Intel 1000	Blue	BT2.1	Prem 64	May 11
1022-46U	i5-2410M	2.30	2.90	4GBx2	14.0" HD	LED	2.0M	Intel HD	750GB 5400	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	May 11
1022-47U	i5-2410M	2.30	2.90	4GBx2	14.0" HD	LED	2.0M	Intel HD	750GB 5400	DVD±RW	Intel 1000	Blue	BT2.1	Prem 64	May 11
1022-49U	i5-2410M	2.30	2.90	4GBx1	14.0" HD	LED	2.0M	Intel HD	750GB 5400	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	Sep 11
1022-4AU	i5-2410M	2.30	2.90	4GBx1	14.0" HD	LED	2.0M	Intel HD	750GB 5400	DVD±RW	Intel 1000	Pink	BT2.1	Prem 64	Sep 11
1022-4BU	i5-2410M	2.30	2.90	4GBx2	14.0" HD	LED	2.0M	Intel HD	750GB 5400	Blu-ray	Intel 1000	Black	BT2.1	Prem 64	Sep 11
1022-4MU	i5-2430M	2.40	3.00	4GBx2	14.0" HD	LED	2.0M	Intel HD	750GB 5400	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	Dec 11
1022-4NU	i5-2430M	2.40	3.00	4GBx2	14.0" HD	LED	2.0M	Intel HD	750GB 5400	Blu-ray	Intel 1000	Black	BT2.1	Prem 64	Dec 11
1022-4QU	i5-2430M	2.40	3.00	4+2GB	14.0" HD	LED	2.0M	Intel HD	500GB 5400	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	Dec 11
1022-4RU	i5-2430M	2.40	3.00	4GBx1	14.0" HD	LED	2.0M	Intel HD	500GB 5400	DVD±RW	Intel 1000	Pink	BT2.1	Prem 64	Dec 11
1022-4SU	i5-2430M	2.40	3.00	4GBx1	14.0" HD	LED	2.0M	Intel HD	500GB 5400	DVD±RW	Intel 1000	Blue	BT2.1	Prem 64	Dec 11
1022-5LU	i5-2430M	2.40	3.00	4GBx2	14.0" HD	LED	2.0M	Intel HD	500GB 7200	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	Dec 11
1022-5MU	i5-2430M	2.40	3.00	4GBx2	14.0" HD	LED	2.0M	Intel HD	500GB 5400	DVD±RW	Intel 1000	Blue	BT2.1	Prem 64	Dec 11

- 14.0" widescreen, glossy display with LED backlight
- Integrated 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC
- Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache). DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache). DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed)
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	<ul style="list-style-type: none"> • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW, Blu-ray) • Cyberlink PowerDVD (Blu-ray) • Lenovo DirectShare
Diskette drive	None	65-watt AC adapter Wireless on/off switch EPEAT™ gold rating ENERGY STAR® qualified RoHS-compliant
SATA optical	Some: DVD burner, dual-layer support, 12.7mm high, tray-in Some: Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in	
SATA disk	500GB (5400 rpm), 500GB (7200 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high	
Widescreen display	14.0" (355.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator	Limited Warranty¹² <ul style="list-style-type: none"> ⇒ 1-year warranty ⇒ Mail In repair service ⇒ Service upgrade options⁵⁸ (in eligible locations):⁹ <ul style="list-style-type: none"> • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant	
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key	
Numeric keypad	None	
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control	<ul style="list-style-type: none"> • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538
Light sensor	None	
Touch pad	One-piece touch pad with scroll feature, multi-touch	
Dimensions ³	(WxDxH): 13.4" x 9.1" x 0.8" to 1.3"; 341mm x 232mm x 20mm to 34mm	
Weight ²	with optical drive and battery: <i>6-cell</i> : 4.85 lb (2.2 kg)	<ul style="list-style-type: none"> • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538
Case color	Dusk black, sky blue, or pink top, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	Up to 5 hr	<ul style="list-style-type: none"> • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	None	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)	
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	<ul style="list-style-type: none"> • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538
TV tuner	None	
PCIe Mini Card	One PCIe Mini Card slot	
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000	
Bluetooth™	Bluetooth 2.1 wireless + EDR	<ul style="list-style-type: none"> • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538
Modem	None	
Ethernet	10/100M ethernet, Realtek® RTL8105E	
Audio support	High Definition (HD) Audio, RealTek ALC269Q-VB codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)	
Security	Hard disk password, administrator password, security lockhole	<ul style="list-style-type: none"> • 1-year Lenovo Onsite Repair¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538
Fingerprint reader	None	

See footnotes for important warranty information

US models announced December 21, 2011; previous models on May 18 or September 1, 2011

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(RUM1-1) December 2011



Lenovo IdeaPad Z570



Lenovo IdeaPad Z570



Lenovo IdeaPad Z570



Lenovo IdeaPad Z570



Lenovo IdeaPad Z570



Lenovo IdeaPad Z570

IdeaPad™ Z570 (1024) - Integrated (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload
1024-32U	i5-2520M	2.50	3.20	2+4GB	15.6" HD	LED	2.0M	Intel HD	500GB ⁸	DVD±RW	11b/g/n	Gray	BT2.1	Prem 64
1024-33U	i3-2310M	2.10		2GBx2	15.6" HD	LED	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Gray	BT2.1	Prem 64
1024-3SU	i3-2310M	2.10		2GBx2	15.6" HD	LED	0.3M	Intel HD	500GB	Blu-ray	Intel 1000	Gunmetal gray	BT2.1	Prem 64
1024-95U	i3-2310M	2.10		2GBx2	15.6" HD	LED	0.3M	Intel HD	750GB	DVD±RW	Intel 1000	Gunmetal gray		Prem 64
1024-3JU	i3-2310M	2.10		2GBx2	15.6" HD	LED	0.3M	Intel HD	500GB	DVD±RW	Intel 1000	Gunmetal gray		Prem 64
1024-94U	i5-2410M	2.30	2.90	2+4GB	15.6" HD	LED	0.3M	Intel HD	750GB	DVD±RW	Intel 1000	Gunmetal gray	BT2.1	Prem 64
1024-3WU	i5-2410M	2.30	2.90	2GBx2	15.6" HD	LED	0.3M	Intel HD	750GB	DVD±RW	Intel 1000	Gunmetal gray	BT2.1	Prem 64
1024-96U	i7-2630QM	2.00	2.90	2GBx2	15.6" HD	LED	0.3M	Intel HD	750GB	DVD±RW	Intel 1000	Gunmetal gray	BT2.1	Prem 64

- 15.6" widescreen, glossy display with LED backlight
- Integrated 0.3 or 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC
- Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00 GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW, Blu-ray) • Cyberlink PowerDVD (Blu-ray) • Lenovo DirectShare
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Diskette drive	None	
SATA optical	Some: DVD burner, dual-layer support, 12.7mm high, tray-in Some: Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in	
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high	
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus, LED indicator	Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant	
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key	
Numeric keypad	Numeric keypad on right of keyboard	
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control	
Light sensor	None	Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Touch pad	One-piece touch pad with scroll feature, multi-touch	
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.8" to 1.4"; 376mm x 250mm x 20mm to 35.5mm	
Weight ²	with optical drive and battery: 6-cell: 5.73lb (2.6 kg)	
Case color	Gray or gunmetal gray top, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	Up to 5 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	None	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)	Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
TV tuner	None	
PCIe Mini Card	One PCIe Mini Card slot	
11b/g/n	Some: 11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® or Atheros® chip	
Intel 1000	Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000	Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Bluetooth™	Some: Bluetooth 2.1 wireless + EDR	
Modem	None	
Ethernet	10/100M ethernet, Realtek® RTL8105E	
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)	
Security	Hard disk password, supervisor password, security lockhole	Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Fingerprint reader	None	

See footnotes for important warranty information

US models announced July 6, 2011; previous models on March 28, 2011

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(LIQR1-1) July 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload
1024-9LU	i3-2330M	2.20		4GBx1	15.6" HD	LED	0.3M	Intel HD	500GB ⁸	DVD±RW	Intel 1000	Gunmetal gray		Prem 64
1024-9MU	i3-2330M	2.20		4+2GB	15.6" HD	LED	0.3M	Intel HD	750GB	DVD±RW	Intel 1000	Gunmetal gray		Prem 64
1024-9QU	i5-2430M	2.40	3.00	4+2GB	15.6" HD	LED	0.3M	Intel HD	750GB	DVD±RW	Intel 1000	Gunmetal gray	BT2.1	Prem 64
1024-9RU	i5-2430M	2.40	3.00	4GBx2	15.6" HD	LED	0.3M	Intel HD	750GB	Blu-ray	Intel 1000	Gunmetal gray	BT2.1	Prem 64
1024-9UU	i7-2670QM	2.20	3.10	4+2GB	15.6" HD	LED	0.3M	Intel HD	750GB	DVD±RW	Intel 1000	Gunmetal gray	BT2.1	Prem 64

- **15.6" widescreen, glossy display with LED backlight**
- **Integrated 0.3 or 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2330M processor (dual-core, 2.20GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • Windows Live Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW, Blu-ray) • Cyberlink PowerDVD (Blu-ray) • Lenovo DirectShare
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Diskette drive	None		
SATA optical	<i>Some:</i> DVD burner, dual-layer support, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in		
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high		Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus, LED indicator		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key		
Numeric keypad	Numeric keypad on right of keyboard		
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control		
Light sensor	None		
Touch pad	One-piece touch pad with scroll feature, multi-touch		
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.8" to 1.4"; 376mm x 250mm x 20mm to 35.5mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : 5.73lb (2.6 kg)		
Case color	Gray or gunmetal gray top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	Up to 5 hr		
Chipset	Mobile Intel HM65 Express Chipset		Limited Warranty ¹² ⇒ 1-year warranty ⇒ Mail In repair service ⇒ Service upgrade options ⁵⁸ (in eligible locations). ⁹ • 1-year Lenovo Onsite Repair ¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair ¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCIe Mini Card slot		
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000		
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR		
Modem	None		
Ethernet	10/100M ethernet, Realtek® RTL8105E		
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		
Security	Hard disk password, supervisor password, security lockhole		
Fingerprint reader	None		

See footnotes for important warranty information
 US models announced October 13, 2011

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 (LIQR1-5) October 2011

IdeaPad™ Z570 (1024) - Integrated (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Bluetooth	Win7 preload	Avail date
1024-34U	i5-2410M	2.30	2.90	4GBx1	15.6" HD	LED	0.3M	Intel HD	500GB ⁸	DVD±RW	Intel 1000	Gray		Prem 64	Jun 11
1024-36U	i3-2310M	2.10		4GBx1	15.6" HD	LED	0.3M	Intel HD	320GB	DVD±RW	Intel 1000	Gray		Prem 64	Jun 11
1024-97U	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	2.0M	Intel HD	750GB	BD burner	Intel 1000	Black	BT2.1	Prem 64	Jun 11
1024-98U	i7-2630QM	2.00	2.90	4GBx1	15.6" HD	LED	2.0M	Intel HD	500GB	BD burner	Intel 1000	Black	BT2.1	Prem 64	Jun 11
1024-9GU	i5-2410M	2.30	2.90	4GBx1	15.6" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Blue	BT2.1	Prem 64	Sep 11
1024-9JU	i7-2630QM	2.00	2.90	4GBx2	15.6" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	Sep 11
1024-ALU	i5-2430M	2.40	3.00	4+2GB	15.6" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	Dec 11
1024-AVU	i7-2670QM	2.20	3.10	4GBx2	15.6" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Black	BT2.1	Prem 64	Dec 11

- **15.6" widescreen, glossy display with LED backlight**
- **Integrated 0.3 or 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00 GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20 GHz, 6MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo DirectShare
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Diskette drive	None		
SATA optical	<i>Some:</i> DVD burner, dual-layer support, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ burner, Blu-ray and DVD disk recordable, 12.7mm, tray-in		
SATA disk	320GB (5400 rpm), 500GB (5400 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high		
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus, LED indicator		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI, HDCP-compliant		
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key		
Numeric keypad	Numeric keypad on right of keyboard		
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control		
Light sensor	None		
Touch pad	One-piece touch pad with scroll feature, multi-touch		
Dimensions ³	<i>(WxDxH):</i> 14.8" x 9.8" x 0.8" to 1.4"; 376mm x 250mm x 20mm to 35.5mm		Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Weight ²	with optical drive and battery: <i>6-cell:</i> 5.73lb (2.6 kg)		
Case color	Gray, blue, or black top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	Up to 5 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCIe Mini Card slot		
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000		
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface		
Modem	None		
Ethernet	10/100M ethernet, Realtek® RTL8105E		
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		
Security	Hard disk password, supervisor password, security lockhole		
Fingerprint reader	None		

Limited Warranty ¹² <ul style="list-style-type: none">⇒ 1-year warranty⇒ Mail In repair service⇒ Service upgrade options⁵⁸ (in eligible locations):⁹<ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
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See footnotes for important warranty information

US models announced December 21, 2011; previous models on June 8, June 22, or September 1, 2011

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(LIQR1-2) December 2011

- Limited Warranty¹²**
- ⇒ **1-year warranty**
 - ⇒ **Mail In repair service**
 - ⇒ **Service upgrade options⁵⁸ (in eligible locations):⁹**
 - **1-year Lenovo Onsite Repair¹³** 78Y1532
 - **1-year Onsite with accidental damage protection** 78Y1533
 - **2-year Lenovo Onsite Repair¹³** 78Y1536
 - **3-year Lenovo Depot Repair** 78Y1538
 - ⇒ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**

IdeaPad™ Z570 (1024) - NVIDIA (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload
1024-3ZU	i5-2410M	2.30	2.90	4+2GB	15.6" HD	LED	0.3M	GT 520M	750GB ⁸	Blu-ray	Intel 1000	Gunmetal gray	BT2.1	Prem 64

- 15.6" widescreen, glossy display with LED backlight
- Integrated 0.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC
- Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW, Blu-ray)• Cyberlink PowerDVD (Blu-ray)• Lenovo DirectShare
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Diskette drive	None	
SATA optical	Blu-ray™ burner, Blu-ray and DVD disk recordable, 12.7mm, tray-in	
SATA disk	750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high	
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	90-watt AC adapter Wireless on/off switch Graphic Optimus/Integrated switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® GT 520M , PCI Express® x16, 1GB DDR3 memory, DirectX® 11, NVIDIA CUDA™ technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector	
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key	
Numeric keypad	Numeric keypad on right of keyboard	
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control	
Light sensor	None	
Touch pad	One-piece touch pad with scroll feature, multi-touch	
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.8" to 1.4"; 376mm x 250mm x 20mm to 35.5mm	
Weight ²	with optical drive and battery: 6-cell: 5.73lb (2.6 kg)	
Case color	Gray or gunmetal gray top, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	Up to 4.5 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	None	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)	
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
TV tuner	None	
PCIe Mini Card	One PCIe Mini Card slot	
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000	
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface	
Modem	None	
Ethernet	10/100M ethernet, Realtek® RTL8105E	
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)	
Security	Hard disk password, supervisor password, security lockhole	
Fingerprint reader	None	

See footnotes for important warranty information
US model announced July 6, 2011

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IdeaPad™ Z570 (1024) - NVIDIA (web only models)

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Blue-tooth	Win7 preload
1024-9HU	i5-2410M	2.30	2.90	4GBx2	15.6" HD	LED	2.0M	GT 540M	750GB ⁸	DVD±RW	Intel 1000	Gunmetal gray	BT2.1	Prem 64
1024-AKU	i5-2430M	2.40	3.00	4GBx2	15.6" HD	LED	2.0M	GT 540M	750GB	DVD±RW	Intel 1000	Gunmetal gray	BT2.1	Prem 64

- **15.6" widescreen, glossy display with LED backlight**
- **Integrated 0.3 or 2.0 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Widescreen flexibility; two-spindle</i> Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology										Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW, Blu-ray)• Lenovo DirectShare			
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													
Diskette drive	None													
SATA optical	DVD burner, dual-layer support, 12.7mm high, tray-in													
SATA disk	750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high													
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus, LED indicator													
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® GT 540M , PCI Express® x16, 1GB DDR3 memory, DirectX® 11, NVIDIA CUDA™ technology, External monitor support via analog VGA DB-15 connector / digital HDMI connector													
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key													
Numeric keypad	Numeric keypad on right of keyboard													
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control													
Light sensor	None													
Touch pad	One-piece touch pad with scroll feature, multi-touch													
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.8" to 1.4"; 376mm x 250mm x 20mm to 35.5mm													
Weight ²	with optical drive and battery: 6-cell : 5.73lb (2.6 kg)													
Case color	Gunmetal gray top, black bottom													
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic													
Battery - type	Lithium Ion 6-cell													
Battery - life ¹⁰	Up to 4.5 hr													
Chipset	Mobile Intel HM65 Express Chipset													
ExpressCard/34	None													
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)													
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
TV tuner	None													
PCIe Mini Card	One PCIe Mini Card slot													
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000													
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface													
Modem	None													
Ethernet	10/100M ethernet, Realtek® RTL8105E													
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)													
Security	Hard disk password, supervisor password, security lockhole													
Fingerprint reader	None													

Limited Warranty¹²
➤ **1-year warranty**
➤ **Mail In repair service**
➤ **Service upgrade options⁵⁸** (in eligible locations):⁹

- **1-year Lenovo Onsite Repair¹³** 78Y1532
- **1-year Onsite with accidental damage protection** 78Y1533
- **2-year Lenovo Onsite Repair¹³** 78Y1536
- **3-year Lenovo Depot Repair** 78Y1538

➤ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**

See footnotes for important warranty information

US model(s) announced December 21, 2011; previous models on September 1, 2011

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(LIQR1-4) December 2011

IdeaPad™ Z575 (1299) - Integrated

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	Base (GHz)	Max (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk GB rpm	Optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload
1299-22U	A4-3300M	1.90	2.50	2GBx2	15.6" HD	LED	0.3M	HD 6480G	500G 5400	DVD±RW	11b/g/n	Gunmetal gray	None	Prem 64
1299-25U	A6-3400M	1.40	2.30	2+4GB	15.6" HD	LED	0.3M	HD 6520G	750G 5400	DVD±RW	11b/g/n	Gunmetal gray	None	Prem 64
1299-27U	A8-3500M	1.50	2.40	2+4GB	15.6" HD	LED	0.3M	HD 6620G	750G 5400	DVD±RW	11b/g/n	Gunmetal gray	BT2.1	Prem 64

- 15.6" widescreen, glossy display with LED backlight
- Integrated 0.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face
- Touch pad supports multi-touch function (pinch, expansion, chiral motion)
- SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC
- Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows
- OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle AMD Accelerated Processor A4-3300M (dual-core, 1.90GHz, 2MB L2 cache), integrated AMD Radeon™ HD 6480G Graphics, AMD Turbo Core technology (Up to 2.50GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A6-3400M (quad-core, 1.40GHz, 4MB L2 cache), integrated AMD Radeon HD 6520G Graphics, AMD Turbo Core technology (Up to 2.30GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A8-3500M (quad-core, 1.50GHz, 4MB L2 cache), integrated AMD Radeon HD 6620G Graphics, AMD Turbo Core technology (Up to 2.40GHz), integrated DDR3 memory controller (up to 1333MHz)										Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)			
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets													
Diskette drive	None													
Optical	DVD burner, dual-layer support, 12.7mm high, tray-in													
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high													
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator													
Graphics	<i>Some:</i> AMD Radeon HD 6480G Graphics , in A4-3300M, DirectX® 11, use system memory; <i>Some:</i> AMD Radeon HD 6520G Graphics , in A6-3400M, DirectX 11, use system memory; External monitor support via analog VGA DB-15 connector / digital HDMI connector													
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key													
Numeric keypad	Numeric keypad on right of keyboard													
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control													
Light sensor	None													
Touch pad	One-piece touch pad with scroll feature, multi-touch													
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.8" to 1.4"; 376mm x 250mm x 20mm to 35.5mm													
Weight ²	with optical drive and battery: 6-cell: 5.73lb (2.6 kg)													
Case color	Gunmetal gray top, black bottom										65-watt AC adapter			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic										Wireless on/off switch			
Battery - type	Lithium Ion 6-cell										EPEAT™ Gold rating			
Battery - life ¹⁰	Up to 5 hr										ENERGY STAR® 5.0-compliant			
Chipset	AMD A60M FCH										RoHS-compliant			
ExpressCard/34	None													
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)													
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
TV tuner	None													
PCIe Mini Card	One PCIe Mini Card slot													
11b/g/n	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® or Atheros® chip													
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface													
Modem	None													
Ethernet	10/100M ethernet, Realtek® RTL8105E													
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)													
Security	Hard disk password, supervisor password, security lockhole													
Fingerprint reader	None													

Limited Warranty¹²

- ⇒ **1-year warranty**
- ⇒ **Mail In repair service**
- ⇒ **Service upgrade options**⁵⁸ (in eligible locations):⁹
 - **1-year Lenovo Onsite Repair**¹³ 78Y1532
 - **1-year Onsite with accidental damage protection** 78Y1533
 - **2-year Lenovo Onsite Repair**¹³ 78Y1536
 - **3-year Lenovo Depot Repair** 78Y1538
- ⇒ **24x7**¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686

See footnotes for important warranty information

US model(s) announced November 2, 2011; previous models on July 20, 2011

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(FLMC1-2) November 2011

IdeaPad™ Z575 (1299) - Integrated (web only models)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	Base (GHz)	Max (GHz)	Memory	Widescreen display	CCFL or LED	Camera	Graphics	SATA disk GB rpm	Optical	PCIe Mini Card 802.11	Top color	Blue- tooth	Win7 preload
1299-32U	E2-3000M	1.80	2.40	2GBx1	15.6" HD	LED	0.3M	HD 6380G	320G 7200	DVD±RW	11b/g/n	Gunmetal gray	None	Prem 64
1299-33U	A4-3300M	1.90	2.50	4GBx1	15.6" HD	LED	0.3M	HD 6480G	500G 5400	DVD±RW	11b/g/n	Gunmetal gray	None	Prem 64
1299-34U	A6-3400M	1.40	2.30	4GBx1	15.6" HD	LED	0.3M	HD 6520G	750G 5400	DVD±RW	11b/g/n	Gunmetal gray	None	Prem 64

- **15.6" widescreen, glossy display with LED backlight**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Touch pad supports multi-touch function (pinch, expansion, chiral motion)**
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **Lenovo Rescue System provides OneKey™ Recovery and OneKey Antivirus without booting into Windows**
- **OneKey Theater allows pressing one key to optimize video and audio experience by switching from normal mode to movie mode**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle AMD Accelerated Processor E2-3000M (dual-core, 1.80GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6380G Graphics, AMD Turbo Core technology (Up to 2.40GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A4-3300M (dual-core, 1.90GHz, 2MB L2 cache), integrated AMD Radeon HD 6480G Graphics, AMD Turbo Core technology (Up to 2.50GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A6-3400M (quad-core, 1.40GHz, 4MB L2 cache), integrated AMD Radeon HD 6520G Graphics, AMD Turbo Core technology (Up to 2.30GHz), integrated DDR3 memory controller (up to 1333MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Diskette drive	None		
Optical	DVD burner, dual-layer support, 12.7mm high, tray-in		
SATA disk	320GB (7200 rpm), 500GB (5400 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 7.0mm or 9.5mm high		
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator		
Graphics	<i>Some:</i> AMD Radeon HD 6380G Graphics , in E2-3000M, DirectX® 11, use system memory; <i>Some:</i> AMD Radeon HD 6480G Graphics , in A4-3300M, DirectX 11, use system memory; <i>Some:</i> AMD Radeon HD 6520G Graphics , in A6-3400M, DirectX 11, use system memory; External monitor support via analog VGA DB-15 connector / digital HDMI connector		
Keyboard	Full-size keyboard, 6-row, multimedia Fn keys, recovery key		
Numeric keypad	Numeric keypad on right of keyboard		
Touch controls	Touch-sensitive buttons for mute, volume up, volume down, OneKey Theater, and Smart noise control		
Light sensor	None		
Touch pad	One-piece touch pad with scroll feature, multi-touch		
Dimensions ³	(WxDxH): 14.8" x 9.8" x 0.8" to 1.4"; 376mm x 250mm x 20mm to 35.5mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : 5.73lb (2.6 kg)		
Case color	Gunmetal gray top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	Up to 5 hr		
Chipset	AMD A60M FCH		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCIe Mini Card slot		
11b/g/n	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® or Atheros® chip		
Bluetooth™	None		
Modem	None		
Ethernet	10/100M ethernet, Realtek® RTL8105E		
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / SRS® Premium Sound™, stereo speakers (2 watt x 2) / analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		
Security	Hard disk password, supervisor password, security lockhole		
Fingerprint reader	None		
			65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
			Limited Warranty ¹² ⇒ 1-year warranty ⇒ Mail In repair service ⇒ Service upgrade options ⁵⁸ (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686

65-watt AC adapter
Wireless on/off switch
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant

Limited Warranty¹²

- ⇒ **1-year warranty**
- ⇒ **Mail In repair service**
- ⇒ **Service upgrade options⁵⁸** (in eligible locations):⁹
 - **1-year Lenovo Onsite Repair¹³** 78Y1532
 - **1-year Onsite with accidental damage protection** 78Y1533
 - **2-year Lenovo Onsite Repair¹³** 78Y1536
 - **3-year Lenovo Depot Repair** 78Y1538
- ⇒ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹²** via 877-453-6686

See footnotes for important warranty information
US models announced July 20, 2011

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Lenovo Video Docking VDK8726 (57Y6576)



Lenovo Portable DVD Burner DB50 (57Y6487)



Lenovo Wireless Keyboard N5901 (57Y6336)



Wireless Mouse N3903A Metal (57Y6596)
Wireless Mouse N3903A Coffee (57Y6666)



Lenovo Speaker M0520 Black (57Y6360)
Lenovo Speaker M0520 Red (57Y6361)



Lenovo Headset P950 (57Y6605)



Lenovo 15' Backpack B5650 (57Y6457)



IdeaPad T150 TopLoader (55Y9397)

**Partial list of accessories supported on:
IdeaPad S, U, Y, V, and Z series notebooks****Memory (See compatibility matrix on O-IPCM)**

2G PC2-5300 DDR2 SODIMM Memory	57Y6301
1G PC3-8500 DDR3 SODIMM Memory	57Y6509
2G PC3-8500 DDR3 SODIMM Memory	57Y6511
2G PC3-10600 DDR3 SODIMM Memory	57Y6582

Storage and removable storage

Lenovo Portable DVD Burner DB50 (black)	57Y6487
Lenovo Portable DVD Burner DB50 (white)	57Y6488

Expansion

Lenovo Notebook Stand S1801A (black)	57Y6484
Lenovo Video Docking VDK8726	57Y6576

Keyboard

Lenovo Wired Keyboard K4803A (black)	57Y6566
Lenovo Mini Wireless Keyboard N5901A ⁵²	57Y6599 <i>ann 10/26/10</i>
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336 <i>ann 12/08/09</i>
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.	

Mouse

Lenovo Optical Mouse A6010 (red)	57Y6483
Lenovo Optical Mouse A6010 (black)	57Y6255
Lenovo Mini Optical Mouse S10B (white)	55Y9358
Bluetooth Laser Mice N6901A (glossy black)	57Y6482
Lenovo Wireless Mouse N30B (black)	55Y9360
Wireless Mouse N3903A (metal)	57Y6596
Wireless Mouse N3903A (coffee)	57Y6666 <i>ann 01/25/11</i>
Wireless Mouse N3902A (black)	57Y6574
Wireless Mouse N3902A (red)	57Y6673 <i>ann 01/25/11</i>

Multimedia

Lenovo Headset P550	55Y2065
Lenovo Headset P950 (black)	57Y6605 <i>ann 02/08/11</i>
Lenovo mini speaker M220	55Y2033
Lenovo speaker M0520 (black)	57Y6360 <i>ann 02/08/11</i>
Lenovo speaker M0520 (red)	57Y6361 <i>ann 02/08/11</i>

Batteries

IdeaPad S9/S10/S12 Li-Ion Battery 6-cell (b)	45K2178 <i>ann 12/16/08</i>
IdeaPad S9/S10/S12 Li-Ion Battery 6-cell (w)	45K2177 <i>ann 12/16/08</i>
IdeaPad S9/S10 Li-Ion Battery 6-cell (black)	57Y6346 <i>ann 03/22/11</i>
IdeaPad S10-2 Li-Ion Battery 6-cell (black)	55Y9382
IdeaPad S10-2 Li-Ion Battery 6-cell (white)	55Y9383
IdeaPad S10-3t Li-Ion Battery 8-cell (black)	57Y6452
IdeaPad S10-3 Li-Ion Battery 6-cell (white)	57Y6448
IdeaPad S10-3 Li-Ion Battery 6-cell (black)	57Y6446
IdeaPad U150 Li-Ion Battery 6-cell (black)	57Y6354
IdeaPad U160 Li-Ion Battery 3-cell (black)	57Y6517 <i>ann 03/08/11</i>
IdeaPad U160 Li-Ion Battery 3-cell (red)	57Y6518 <i>ann 03/08/11</i>
IdeaPad U160 Li-Ion Battery 6-cell (black)	57Y6519 <i>ann 03/08/11</i>
IdeaPad U160 Li-Ion Battery 6-cell (red)	57Y6520 <i>ann 03/08/11</i>
IdeaPad U350 Li-Ion Battery 8-cell (black)	57Y6352
IdeaPad U350 Li-Ion Battery 4-cell (white)	57Y6265
IdeaPad U450P/U550 Li-Ion Battery 6-cell (b)	57Y6309
IdeaPad U460 Li-Ion Battery 8-cell (black)	57Y6521 <i>ann 03/08/11</i>
IdeaPad Y450/Y550 Li-Ion Battery 6-cell	55Y2054 <i>ann 04/07/09</i>
IdeaPad Y460/Y560 Li-Ion Battery 6-cell (blk)	57Y6440
G460/G560/V360/Z460/Z560 Li Battery 6-cell	57Y6454
IdeaPad Y650 Li-Ion Battery 6-cell	55Y2055 <i>ann 04/07/09</i>
IdeaPad U450 Li-Ion Battery 8-cell (black)	57Y6353
IdeaPad V460/B460 Li-Ion Battery 6-cell	57Y6528
IdeaPad U260 Li-Ion Battery 4-cell (black)	57Y6601
IdeaPad Z360 Li-Ion Battery 6-cell	57Y6527
IdeaPad Y510/Y530/Y710/Y730 Li Batt 6-cell	45J7706
IdeaPad Y430 Li-Ion Battery 6-cell	45K2221
IdeaPad U330 Li-Ion Battery 6-cell	55Y2019

Adapters (See compatibility matrix on O-IPCM)

IdeaPad S9/S10 40W AC Adapter (white)	45K2200 <i>ann 11/18/08</i>
IdeaPad S9/S10 40W AC Adapter (black)	45K2209 <i>ann 11/18/08</i>
Lenovo 30W AC Adapter (white)	57Y6430
Lenovo 30W AC Adapter (black)	57Y6415
Lenovo 40W AC Adapter 40A (white)	55Y9361
Lenovo 40W AC Adapter 40A (black)	55Y9370
Lenovo 65W AC Adapter 65A	57Y6400
IdeaPad 65W AC Adapter	45K2225
Lenovo 90W AC Adapter 90A	57Y6385
Lenovo 90W AC Adapter	45J7717 <i>ann 08/12/08</i>
Lenovo 120W AC Adapter	57Y6549

Carrying Cases

IdeaPad 10" Sleeve S1616 (black)	57Y6456
Targus Eternity 10" Sleeve CS2600-8C	57Y6563
IdeaPad 13" Sleeve S135 (pink)	57Y6320
IdeaPad 13" Sleeve S135 (grey)	57Y6318
IdeaPad 13" Sleeve S135 (black)	57Y6319
IdeaPad 15" Backpack B450 (black-basic)	55Y2094
Lenovo 15" Backpack B5650	57Y6457
IdeaPad 15" TopLoader T150 (green)	55Y9397
IdeaPad 15" Messenger Case M150 (black)	55Y9380
Targus Eternity 15" Backpack CB2650	57Y6560
Targus Eternity 15" Toploader CT2650	57Y6562
IdeaPad 16" TopLoader T360	55Y2100

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

IdeaPad™ Accessories compatibility matrix

Personal Systems Reference (PSREF)

AC Adapter	30W AC Adapter white (57Y6430) black (57Y6415)	S9/S10 40W AC Adapter white (45K2200) black (45K2209)	40W AC Adapter 40A white (55Y9361) black (55Y9370)	65W AC Adapter 65A (57Y6400)	65W AC Adapter (45K2225)	90W AC Adapter 90A (57Y6385)	90W AC Adapter (45J7717)	120W AC Adapter (57Y6549)
S9		x*						
S10		x						
S10-2			x					
S10-3	x							
S10-3s	x							
S10-3i	x							
S10-3c	x							
S12			x					
U150		x						
U330 Integrated					x			
U330 Discrete							x	
U350 Integrated					x			
U350 Discrete							x	
U450 Integrated					x			
U450 Discrete							x	
U450P Integrated					x			
U450P Discrete							x	
U550 Integrated					x			
U550 Discrete							x	
U455 Integrated					x			
U455 Discrete							x	
U460				x				
U460s				x				
Y410 Integrated					x			
Y410 Discrete							x	
Y510 Integrated					x			
Y510 Discrete							x	
Y710 Integrated							x	
Y430 Integrated					x			
Y430 Discrete							x	
Y530 Integrated					x			
Y530 Discrete							x	
Y730 Integrated							x	
Y450 Integrated					x			
Y450 Discrete							x	
Y550 Integrated					x			
Y550 Discrete							x	
Y650 Integrated					x			
Y650 Discrete							x	
Y460 Integrated				x				
Y460 Discrete						x		
Y560 Integrated (except quad-core)				x				
Y560 Discrete (except quad-core)						x		
Y560 (quad-core)								x
Z360				x				
Z370 Integrated (dual-core)				x				
Z370 Discrete (dual-core) and Integrated (quad- core)						x		
Z370 Discrete (quad-core)								x
Z460				x				
Z560				x				
Z570 Integrated (dual-core)				x				
Z570 Discrete (dual-core) and Integrated (quad- core)						x		
Z570 Discrete (quad-core)								x
Z465 Integrated				x				
Z465 Discrete						x		
Z565 Integrated				x				
Z565 Discrete						x		
V360				x				
V460				x				
V560				x				

* Character "x": option supported on system

IdeaPad™ Accessories compatibility matrix

Personal Systems Reference (PSREF)

Memory	2G PC2-5300 DDR2 SODIMM Memory (57Y6301)	1G PC3-8500 DDR3 SODIMM Memory (57Y6509)	2G PC3-8500 DDR3 SODIMM Memory (57Y6511)	2G PC3-10600 DDR3 SODIMM Memory (57Y6582)
S10-2	x			
S10-3				x
S10-3s (DDR2)	x			
S10-3s (DDR3)				x
S10-3t				x
U460 / U460s		x	x	
Y530	x			
Y450		x	x	
Y460		x	x	
Y560		x	x	
V550	x			
V360		x	x	
V460		x	x	
Z360		x	x	
Z460 / Z465		x	x	
Z560 / Z565		x	x	

* Character "x": option supported on system

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

- ¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
- ² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
- ³ **Thinness** may vary at certain points on the system.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- ⁵ **Post-warranty annual maintenance agreement:** Service begins at the end of the base warranty or the end of any other applied warranty and maintenance option, whichever occurs last. Service delivery is not available the same day the maintenance agreement is purchased. Maintenance agreements must be purchased and the registration successfully completed prior to the service being available.
- ⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
- ⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.
- ⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ⁹ **Service upgrade options:** 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.
- ¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2007 during testing. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- ¹¹ **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.
- ¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ¹³ **Onsite Repair:** If a machine is listed as having "On-site", this means that on-site service is available for the replacement of parts for warranty repairs. Certain parts, referred to as Customer Replaceable Unit ("CRU") parts, are easy to install and require little or no tools or technical knowledge. Some examples of CRU parts are mice, keyboards, hard disk drives, speakers, and memory. If your problem can be resolved with a CRU, the Support Center will offer to ship the part to you for you to install.
- ¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.
- ¹⁵ **Modem speeds:** Public network download 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.
- ¹⁶ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.
- ¹⁷ **International Warranty Service** is available for most products in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary and may exclude some holidays.
- ¹⁹ **Depot repair service:** In the United States call 1-877-453-6686. The customer may be asked certain diagnostic questions before a courier is sent. Your purchase includes this depot repair service, available in the U.S. during the limited warranty period.
- ²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.
- ²¹ **For combination drives,** maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.
- ²² **Lenovo Care 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 can be express shipped to you for quick replacement. For 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 terms and conditions for complete details and restrictions.

²⁵ **Wireless WAN Cards:** Wireless data service requires separate agreement with Verizon Wireless. Verizon Wireless, not Lenovo, is solely responsible for service. Monthly and airtime charges may apply. Service may not be available in all areas; purchaser is responsible for verifying with Verizon Wireless that service is available for the intended location before the purchase of the card. For complete details, including service plans, additional required hardware or software, and service coverage, visit www.verizonwireless.com.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.



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December 2011 - Version 411



IdeaCentre K330



IdeaCentre B520

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Part number	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ³	Media reader	SATA disk	SATA optical	Graphics	Modem	Monitor	Camera	Vista preload	Avail date
57-078915	4x5	Celeron E1200	1.60	512KB	2	2GB	16-in-1	320GB ²	DVD±RW	GMA 3100			Camera	Home Prem	May 08
57-078894	4x5	Pentium E2140	1.60	1MB	2	4GB	16-in-1	500GB	DVD±RW	GMA 3100			Camera	Home Prem	May 08
57-076245	4x5	Pentium E2180	2.00	1MB	2	1GB	16-in-1	320GB	DVD±RW	GMA 3100	Mod			Home Basic	May 08
57-076162	4x5	Pentium E2180	2.00	1MB	2	2GB	16-in-1	320GB	DVD±RW	GMA 3100	Mod		Camera	Home Prem	May 08
57-076161	4x5	Pentium E2180	2.00	1MB	2	3GB	16-in-1	500GB	DVD±RW	GMA 3100	Mod			Home Prem	May 08
57-076522	4x5	Pentium E2180	2.00	1MB	2	3GB	16-in-1	500GB	DVD±RW	GMA 3100	Mod	L222	Camera	Home Prem	May 08

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- **(Select models) Lenovo Bright Eye camera and VeriFace face recognition software help control access to your computer by recognizing your face**


Processor	Intel Celeron Dual-Core Processor E1200 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 512KB L2 cache or Intel Pentium® Dual-Core Processor E2140 or E2180 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache		Tower <ul style="list-style-type: none">• Black and silver bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory	1GB, 2GB, 3GB, or 4GB std , 4GB max ⁸ , PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, two 240-pin DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; 1 socket available		Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100) , integrated graphics in G31, uses main memory, one 15-pin analog D-sub connector		Slot 1: half-length,full-height, PCI Express x1 Ver 1.1 Slot 2: half-length,full-height, PCI Express x16 Ver 1.1 Slot 3: half-length,full-height, 32-bit PCI Ver 2.3 * Slot 4: half-length,full-height, 32-bit PCI Ver 2.3 * modem in slot in some models
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 7200 rpm		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH		
SATA DVD±RW	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors		
EIDE controller	One		
EIDE cables	None		
Diskette drive	None		
Media reader	16-in-1 media reader, internal USB 2.0		
Chipset	Intel G31 Express Chipset ; I/O Controller Hub 7 Digital Home (ICH7DH) for SATA 3.0Gb/s, PCI Express® x1, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O for serial, parallel, keyboard, mouse functions		Lenovo L222 Wide <ul style="list-style-type: none">• Widescreen 22-inch flat panel monitor• Active Matrix TFT LCD screen• Supports WSXGA+ 1680x1050 resolution• 16:10 aspect ratio• 22.0" (559mm) viewable image size (diagonal)• 300 nits brightness (typical)• 1000:1 contrast ratio (typical)• 5ms pixel response time• Dual video input: one analog D-sub connector and one digital DVI-D connector• HDCP-compliant• Ergonomic stand tilts and swivels• High-gloss black case• Touch-sensitive control button• Soundbar with speakers included
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) audio, ALC662 codec		
External speakers	None		
Internal speaker	None		
Ethernet	10/100 ethernet on planar, Intel 82562GZ (PHY/MAC)		
Modem	<i>Some:</i> 56K ¹⁰ V.92 data/fax soft modem, PCI adapter		
Security chip	None		
TV tuner	None		
Camera	<i>Some:</i> Lenovo Bright Eye camera, 0.3-megapixel, fixed focus		
Keyboard	104-key antibacterial keyboard (PS/2 connector)		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi		
Power supply	280 watts, universal, manual switch		<i>Lenovo L222 Wide Monitor is only bundled with some models</i>
Preloaded operating system²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® Vista® Home Basic 32- <i>Some:</i> Genuine Windows Vista Home Premium 32✧ 57-076245: Vista Basic logo✧ <i>Others:</i> Vista Premium logo			Available at these retailers <ul style="list-style-type: none">• B&H™• J&R™• Newegg®• TigerDirect• ASI Computer Systems
Preloaded applications⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Lenovo Healthcare Software• Lenovo Media Studio• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2007• EarthLink®• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• VeriFace™• Corel® WinDVD® (DVD±RW)• CyberLink Power2Go (DVD±RW)			Limited Warranty¹ <ul style="list-style-type: none">➤ 1-year parts and labor➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair• 9x5 Next Business Day (78Y1553)➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

See footnotes for important warranty information
US models announced May 12, 2008

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Part number	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	Media reader	SATA disk	SATA optical	Graphics	Modem	Monitor	Camera	Vista preload	Avail date
57-076523	4x5	Core 2 Duo E4600	2.40	2MB	2	3GB	16-in-1	500GB ²	DVD±RW	GMA 3100	Mod	None	None	Home Prem	May 08
57-082791	4x5	Core 2 Duo E7200	2.53	3MB	2	3GB	16-in-1	500GB	DVD±RW	GMA 3100		None	Cam	Home Prem	Aug 08
57-076158	4x5	Core 2 Quad Q6600	2.40	8MB	4	3GB	16-in-1	500GB	DVD±RW	GMA 3100	Mod	None	None	Home Prem	May 08
57-076244	4x5	Core 2 Quad Q6600	2.40	8MB	4	3GB	16-in-1	500GB	Blu-ray	HD 2600 PRO	Mod	None	None	Home Prem	May 08
57-082788	4x5	Core 2 Quad Q6600	2.40	8MB	4	4GB	16-in-1	500GB	DVD±RW	9300 GE	Mod	None	Cam	Home Prem	Aug 08

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Processor	Intel® Core™ 2 Duo Processor E4600 with dual-core. Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache or Intel Core 2 Duo Processor E7200 with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q6600 with quad-core (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 8MB L2 cache		Tower <ul style="list-style-type: none">• Black and silver bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention		
Implementation	Processor in FC-LGA6 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk		
Memory	3GB or 4GB std, 4GB max ⁸ , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 240-pin DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available				
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in G31, uses main memory, one 15-pin analog D-sub connector <i>Some:</i> ATI™ Radeon™ HD 2600 PRO, PCI Express x16, 256MB memory, DirectX® 10, ATI Avivo™, one D-sub connector and one DVI-D connector, HDCP-compliant <i>Some:</i> NVIDIA® GeForce® 9300 GE, PCI Express x16, 256MB memory, DirectX® 10, TurboCache, PureVideo™ HD technology, S-video out, VGA connector, DVI-I connector, HDCP-compliant		Slot 1: half-length, full-height, PCI Express x1 Ver 1.1 Slot 2: half-length, full-height, PCI Express x16 Ver 1.1** Slot 3: half-length, full-height, 32-bit PCI Ver 2.3 * Slot 4: half-length, full-height, 32-bit PCI Ver 2.3 * modem in slot ** used in some models		
SATA disk	500GB, SATA 3.0Gb/s, 7200 rpm				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH				
SATA DVD±RW	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA Blu-ray™	<i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), supports HD-DVD playback, DVD and CD recordable				
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors				
EIDE controller	One				
EIDE cables	None				
Diskette drive	None				
Media reader	16-in-1 media reader, internal USB 2.0				
Chipset	Intel G31 Express Chipset; I/O Controller Hub 7 Digital Home (ICH7DH) for SATA 3Gb/s, PCI Express® x1, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O for serial, parallel, keyboard, mouse functions				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-D in some models)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)				
Audio	High Definition (HD) audio, ALC662 codec				
External speakers	None				
Internal speaker	None				
Ethernet	10/100 ethernet on planar, Intel 82562GZ (PHY/MAC)				
Modem	<i>Some:</i> 56K ¹⁰ V.92 data/fax soft modem, PCI adapter				
Security chip	None		Available at these retailers <ul style="list-style-type: none">• B&H™• J&R™• MICROCENTER®• Newegg®• TigerDirect		
TV tuner	None				
Camera	<i>Some:</i> Lenovo Bright Eye camera, 0.3-megapixel, fixed focus				
Keyboard	104-key anti-bacterial keyboard (PS/2 connector)				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi				
Power supply	280 watts, universal, manual switch				
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® Vista®Home Premium 32⇨ Vista Premium logo		Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Lenovo Healthcare Software• Lenovo Media Studio• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2007• EarthLink®• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• VeriFace™• Corel® WinDVD® (DVD±RW, Blu-ray)• CyberLink Power2Go (DVD±RW, Blu-ray)		Limited Warranty ¹ <ul style="list-style-type: none">⇨ 1-year parts and labor⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇨ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇨ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686	

See footnotes for important warranty information

US models announced July 15, 2008; previous models on May 12, 2008

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Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ³	Media reader	SATA disk	SATA optical	Graphics	Modem	Monitor	Camera	Vista preload	Avail date
5313-3AU	4x5	Celeron E1200	1.60	512KB	2	1GB		160GB ²	DVD	GMA 3100		None		Home Basic	Jul 08
5313-3BU	4x5	Celeron E1200	1.60	512KB	2	1GB	16-in-1	250GB	DVD±RW	GMA 3100	Mod	None		Home Prem	Jul 08
5313-4AU	4x5	Pentium E2180	2.00	1MB	2	2GB	16-in-1	320GB	DVD±RW	GMA 3100	Mod	None	Camera	Home Prem	Jul 08
5313-4BU	4x5	Pentium E2180	2.00	1MB	2	3GB	16-in-1	500GB	DVD±RW	GMA 3100		None	Camera	Home Prem	Jul 08
5313-4DU	4x5	Pentium E2200	2.20	1MB	2	2GB		250GB	DVD±RW	GMA 3100		None		Home Prem	Oct 08
5313-4EU	4x5	Pentium E2200	2.20	1MB	2	3GB		320GB	DVD±RW	GMA 3100		None		Home Prem	Oct 08
5313-4CU	4x5	Pentium E2200	2.20	1MB	2	4GB	16-in-1	500GB	DVD±RW	GMA 3100		None	Camera	Home Prem	Jul 08
5313-5CU	4x5	Pentium E5200	2.50	2MB	2	4GB	16-in-1	640GB	DVD±RW	GMA 3100		None		Home Prem	Nov 08


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- **(Select models) Lenovo Bright Eye camera and VeriFace face recognition software help control access to your computer by recognizing your face**

Processor	Intel Celeron Dual-Core Processor E1200 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 512KB L2 cache or Intel Pentium® Dual-Core Processor E2180, E2200, or E5200 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus; <i>E2180/E2200:</i> 1MB L2 cache; <i>E5200:</i> 2MB L2 cache Processor in FC-LGA6 package in LGA775 socket	Tower <ul style="list-style-type: none">• Black and silver bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention
Implementation		
Memory	1GB, 2GB, 3GB, or 4GB std , 4GB max ⁸ , PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, two 240-pin DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; 1 socket available	Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk Slot 1: half-length,full-height, PCI Express x1 Ver 1.1 Slot 2: half-length,full-height, PCI Express x16 Ver 1.1 Slot 3: half-length,full-height, 32-bit PCI Ver 2.3 * Slot 4: half-length,full-height, 32-bit PCI Ver 2.3 * modem in slot in some models
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100) , integrated graphics in G31, uses main memory, one 15-pin analog D-sub connector	
SATA disk	160GB, 250GB, 320GB, 500GB, or 640GB SATA 3Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	
SATA DVD±RW	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	One	
EIDE cables	None	
Diskette drive	None	
Media reader	<i>Some:</i> 16-in-1 media reader, internal USB 2.0	
Chipset	Intel G31 Express Chipset ; I/O Controller Hub 7 Digital Home (ICH7DH) for SATA 3Gb/s, PCI Express® x1, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O for serial, parallel, keyboard, mouse functions	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, ALC662 codec	
External speakers	None	
Internal speaker	None	
Ethernet	10/100 ethernet on planar, Intel 82562GZ (PHY/MAC)	
Modem	<i>Some:</i> 56K ¹⁰ V.92 data/fax soft modem, PCI adapter	
Security chip	None	
TV tuner	None	
Camera	<i>Some:</i> Lenovo Bright Eye camera, 0.3-megapixel, fixed focus	
Keyboard	104-key antibacterial keyboard (PS/2 connector)	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi	
Power supply	280 watts, universal, manual switch	
Preloaded operating system ²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® Vista® Home Basic 32- <i>Some:</i> Genuine Windows Vista Home Premium 32✧ <i>5313-3AU/3BU:</i> Vista Basic logo✧ <i>Others:</i> Vista Premium logo		Available at these retailers <ul style="list-style-type: none">• lenovo.com• Fry's
Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Lenovo Healthcare Software• Lenovo Media Studio• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2007• EarthLink®• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• VeriFace™• Corel® WinDVD® (DVD, DVD±RW)• CyberLink Power2Go (DVD, DVD±RW)		Limited Warranty ¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686



	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	Media reader	SATA disk	SATA optical	Graphics	Modem	Monitor	Camera	Vista preload	Availability
E8500	5313-1FU	4x5	Core 2 Duo E7200	2.53	3MB	2	4GB	16-in-1	640GB ²	DVD±RW	GMA 3100	None	None	Cam	Home Prem	Oct 08
	5313-2BU	4x5	Core 2 Quad Q6600	2.40	8MB	4	4GB	16-in-1	500GB	DVD±RW	GMA 3100	None	None		Home Prem	Jul 08
	5313-2CU	4x5	Core 2 Quad Q6600	2.40	8MB	4	4GB	16-in-1	500GB	Blu-ray	9300 GE	None	None		Home Prem	Jul 08
E8500	5313-2FU	4x5	Core 2 Quad Q6600	2.40	8MB	4	4GB	16-in-1	1TB	Blu-ray	9300 GE	None	None		Home Prem	Oct 08

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- **(Select models) Healthcare eyesight protection software detect distance between user and monitor and adjusts monitor brightness based on environment**
- **(Select models) Lenovo Bright Eye camera and VeriFace face recognition software help control access to your computer by recognizing your face**

Processor	Intel® Core 2 Duo™ Processor E7200 with dual-core Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q6600 with quad-core (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 8MB L2 cache		Tower <ul style="list-style-type: none">• Black and silver bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention		
Implementation	Processor in FC-LGA6 package in LGA775 socket		<div></div>		
Memory	4GB std , 4GB max ⁸ , PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, two 240-pin DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available				
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 3100 (GMA 3100) , integrated graphics in G31, uses main memory, one 15-pin analog D-sub connector <i>Some:</i> NVIDIA® GeForce® 9300 GE , PCI Express® x16, 256MB memory, DirectX® 10, TurboCache, PureVideo™ HD technology, S-video out, VGA connector, DVI-I connector, HDCP-compliant				
SATA disk	500GB, 640GB , or 1TB , SATA 3.0Gb/s, 7200 rpm				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH				
SATA DVD±RW	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		Available at these retailers <ul style="list-style-type: none">• lenovo.com• Fry's		
SATA Blu-ray™	<i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, supports HD-DVD playback, DVD and CD recordable				
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors				
EIDE controller	One				
EIDE cables	None				
Diskette drive	None		Limited Warranty¹ <ul style="list-style-type: none">➤ 1-year parts and labor➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686		
Media reader	16-in-1 media reader, internal USB 2.0				
Chipset	Intel G31 Express Chipset ; I/O Controller Hub 7 Digital Home (ICH7DH) for SATA 3Gb/s, PCI Express® x1, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O for serial, parallel, keyboard, mouse functions				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-I in some models)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)				
Audio	High Definition (HD) audio, ALC662 codec				
External speakers	None				
Internal speaker	None				
Ethernet	10/100 ethernet on planar, Intel 82562GZ (PHY/MAC)				
Modem	None				
Security chip	None				
TV tuner	None				
Camera	<i>Some:</i> Lenovo Bright Eye camera, 0.3-megapixel, fixed focus				
Keyboard	104-key anti-bacterial keyboard (PS/2 connector)				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi				
Power supply	280 watts, universal, manual switch				
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® Vista® Home Premium 32♦ Vista Premium logo		Preloaded applications⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Lenovo Healthcare Software• Lenovo Media Studio• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2007• EarthLink®• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• VeriFace™• Corel® WinDVD® (DVD±RW, Blu-ray)• CyberLink Power2Go (DVD±RW, Blu-ray)			

See footnotes for important warranty information

US models announced October 22, 2008; previous models on July 15, 2008

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(KW1-4) February 2009

Part number	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	Media reader	SATA disk	SATA optical	Graphics	Monitor	Camera	802.11 wireless	Vista preload	Vista logo	Avail date
57092255	4x5	E5200	2.50	2MB	2	4GB	16-in-1	500GB ²	Blu-ray	GMA 4500			None	Prem 64	Basic	Jan 09
57094704	4x5	E5200	2.50	2MB	2	4GB	16-in-1	640GB	DVD±RW	GMA 4500	L222 HD	Camera	None	Prem 64	Basic	Jan 09
57092262	4x5	Q8200	2.33	4MB	4	4GB	16-in-1	1TB	Blu-ray	GMA 4500			11b/g	Prem 64	Basic	Mar 09

- **Antibacterial keyboard uses special material on the surface of the keys to restrain bacterial growth**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**

Processor	Intel® Pentium® Dual-Core Processor E5200 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache or Intel Core 2 Quad Processor Q8200 with quad-core (dual-core on dual-die), Intel 64 Technology, Execute Disable Bit, EIST, 1333MHz system bus, and 4MB L2 cache Processor in FC-LGA6 package in LGA775 socket	Tower <ul style="list-style-type: none">• Black bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention
Implementation		Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk
Memory	4GB std , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available	Slot 1: half-length,full-height, PCI Express x16 Ver 2.0 Slot 2: half-length,full-height, PCI Express x1 Ver 2.0 * Slot 3: half-length,full-height, 32-bit PCI Ver 2.3 Slot 4: half-length,full-height, 32-bit PCI Ver 2.3 * Wireless adapter in slot in some models
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in G43, uses main memory, DirectX® 10, one 15-pin analog VGA DB-15 connector	
SATA disk	500GB , 640GB , or 1TB SATA 3Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10	
SATA DVD±RW	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA Blu-ray™	<i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, DVD and CD recordable	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	None	
Diskette drive	None	
Media reader	16-in-1 media reader, internal USB 2.0	
Chipset	Intel G43 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 [ICH10] (SATA 3.0Gb/s, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5147-NW Super I/O	Lenovo L222 Wide (HD) <ul style="list-style-type: none">• Widescreen 22-inch flat panel monitor• Active Matrix TFT LCD screen• Supports WUXGA 1920x1200 resolution• High Definition (HD) ready; supports 1080p video• 16:10 aspect ratio• 22.0" (559mm) viewable image size (diagonal)• 300 nits brightness (typical)• 1000:1 contrast ratio (typical)• 5ms pixel response time• Dual video input: one analog D-sub connector and one digital DVI-D connector• HDCP-compliant• Ergonomic stand tilts and swivels• High-gloss black case• Touch-sensitive control button• Soundbar with speakers included <i>Lenovo L222 Wide (HD) Monitor is only bundled with some models</i>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, one serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, ALC662 codec	
External speakers	None	
Internal speaker	None	
Ethernet	10/100 ethernet on planar, RealTek® RTL8102E	
Wireless	<i>Some:</i> 11b/g wireless ⁴ , Broadcom BCM4312, PCIe x1 adapter	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	<i>Some:</i> Lenovo Bright Eye camera, 0.3-megapixel, fixed focus	
Keyboard	104-key antibacterial keyboard (PS/2 connector)	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi	
Power supply	280 watts, universal, manual switch	
Preloaded operating system ²⁰ - Genuine Windows® Vista® Home Premium 64		Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2008• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• Corel® WinDVD® (DVD±RW, Blu-ray)• CyberLink Power2Go (DVD±RW, Blu-ray)
		Available at these retailers <ul style="list-style-type: none">• Newegg®• TigerDirect
		Limited Warranty ¹ <ul style="list-style-type: none">↪ 1-year parts and labor↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)↪ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)↪ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

See footnotes for important warranty information

US model announced March 17, 2009; previous models on January 27, 2009

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(KW2-1) March 2009


Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	Media reader	SATA disk	SATA optical	Graphics	Monitor	Camera	802.11 wireless	Vista preload	Vista logo	Avail date
5358-4AU	4x5	E2220	2.40	1MB	2	2GB	16-in-1	250GB ²	Blu-ray	GMA 4500	None	None		Prem 64	Basic	Jan 09
5358-4BU	4x5	E2220	2.40	1MB	2	4GB	16-in-1	640GB	Blu-ray	GMA 4500	None	None		Prem 64	Basic	Jan 09
5358-1FU	4x5	E5200	2.50	2MB	2	4GB	16-in-1	500GB	DVD±RW	GMA 4500	None	None		Prem 64	Basic	Jan 09
5358-1BU	4x5	E5200	2.50	2MB	2	4GB	16-in-1	640GB	DVD±RW	9300 GE	None	None	11b/g	Prem 64	Prem	Jan 09
5358-2CU	4x5	Q8200	2.33	4MB	4	4GB	16-in-1	640GB	DVD±RW	9300 GE	None	None		Prem 64	Prem	Jan 09
5358-2DU	4x5	Q8200	2.33	4MB	4	4GB	16-in-1	1TB	Blu-ray	9300 GE	None	None	11b/g	Prem 64	Prem	Jan 09

- **Antibacterial keyboard uses special material on the surface of the keys to restrain bacterial growth**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**

Processor	Intel® Pentium® Dual-Core Processor E2220 or E5200 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus; <i>E2220:</i> 1MB L2 cache; <i>E5200:</i> 2MB L2 cache or Intel Core™ 2 Quad Processor Q8200 with quad-core (dual-core on dual-die), Intel 64 Technology, Execute Disable Bit, EIST, 1333MHz system bus, and 4MB L2 cache Processor in FC-LGA6 package in LGA775 socket	Tower <ul style="list-style-type: none">• Black bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention
Implementation		Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk
Memory	2GB or 4GB std, 4GB max⁸, PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; 1 socket available	Slot 1: half-length,full-height, PCI Express x16 Ver 2.0 ** Slot 2: half-length,full-height, PCI Express x1 Ver 2.0 * Slot 3: half-length,full-height, 32-bit PCI Ver 2.3 Slot 4: half-length,full-height, 32-bit PCI Ver 2.3 * Wireless adapter in slot in some models ** used in some models
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in G43, uses main memory, DirectX® 10, one 15-pin analog VGA DB-15 connector <i>Some:</i> NVIDIA® GeForce® 9300 GE , PCI Express® x16, 512MB memory, DirectX® 10, TurboCache, PureVideo™ HD technology, S-video out for TV-out, VGA DB-15 connector, DVI-I connector, HDCP-compliant	
SATA disk	250GB, 500GB, 640GB or 1TB SATA 3Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10	
SATA DVD±RW	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA Blu-ray™	<i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, DVD and CD recordable	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	None	
Diskette drive	None	
Media reader	16-in-1 media reader, internal USB 2.0	
Chipset	Intel G43 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 [ICH10] (SATA 3.0Gb/s, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5147-NW Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, one serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), 1BU/2CU/2DU: monitor (VGA DB-15, DVI-I), S-Video out; <i>Others:</i> monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, ALC662 codec	
External speakers	None	
Internal speaker	None	
Wireless	<i>Some:</i> 11b/g wireless ⁴ , Broadcom BCM4312, PCIe x1 adapter	
Ethernet	10/100 ethernet on planar, Realtek® RTL8102E	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	None	
Keyboard	104-key antibacterial keyboard (PS/2 connector)	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi	
Power supply	280 watts, universal, manual switch	
Preloaded operating system²⁰ - Genuine Windows® Vista® Home Premium 64		
Preloaded applications⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2008• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• Corel® WinDVD® (DVD±RW, Blu-ray)• CyberLink Power2Go (DVD±RW, Blu-ray)		
		Available at these retailers <ul style="list-style-type: none">• lenovo.com• Fry's
		Limited Warranty¹ <ul style="list-style-type: none">➤ 1-year parts and labor➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

Part number	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	DIMM capacity	Media reader	SATA disk	SATA optical	Graphics	TV tuner	Remote control	Camera	Vista preload	Avail date
57093697	4x5	E2220	2.40	1MB	2	5GB	(2, 2, 1)	16-in-1	500GB ²	DVD±RW	GMA 3100	None	None	None	Prem 64	Jan 09
57093706	4x5	E5200	2.50	2MB	2	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100	None	None	None	Prem 64	Mar 09
57093729	4x5	E7300	2.66	3MB	2	8GB	(2, 2, 2, 2)	16-in-1	1TB	DVD±RW	GMA 3100	None	None	None	Prem 64	Jan 09
57094418	4x5	Q8200	2.33	4MB	4	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100	None	None	None	Prem 64	Mar 09
57093719	4x5	Q8200	2.33	4MB	4	8GB	(2, 2, 2, 2)	16-in-1	1TB	DVD±RW	GMA 3100	None	None	None	Prem 64	Mar 09

- **Antibacterial keyboard uses special material on the surface of the keys to restrain bacterial growth**
- **Lenovo® Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**

Processor	Intel® Pentium® Processor E2220 or E5200 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus; <i>E2220</i> : 1MB L2 cache; <i>E5200</i> : 2MB L2 cache or Intel Core 2 Duo™ Processor E7300 with dual-core , Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q8200 with quad-core (dual-core on dual-die), Intel 64 Technology, Execute Disable Bit, EIST, 1333MHz system bus, and 4MB L2 cache Processor in FC-LGA6 package in LGA775 socket	Tower <ul style="list-style-type: none">• Black bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention
Implementation		Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk
Memory	5GB, 6GB, or 8GB std , 8GB max®, PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, four 240-pin DIMM sockets	Slot 1: half-length,full-height, PCI Express x16 Ver 1.1 Slot 2: half-length,full-height, PCI Express x1 Ver 1.1 Slot 3: half-length,full-height, PCI Express x1 Ver 1.1 Slot 4: half-length,full-height, 32-bit PCI Ver 2.3
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100) , integrated graphics in G33, uses main memory, one 15-pin analog VGA DB-15 connector	
SATA disk	500GB , 640GB, or 1TB , SATA 3.0Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DH	
SATA DVD±RW	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	None	
Diskette drive	None	
Media reader	16-in-1 media reader, internal USB 2.0	
Chipset	Intel G33 Express Chipset (PCI Express® x16), I/O Controller Hub 9 Digital Home [ICH9DH] (SATA 3.0Gb/s support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm), SPDIF-out	
Audio	High Definition (HD) audio, ADI1988 codec	
External speakers	None	
Internal speaker	None	
Ethernet	Gigabit ethernet on planar, Intel 82256DC	
Wireless	None	
Modem	None	
Security chip	None	
TV tuner	None	
Remote control	None	
Camera	None	
Keyboard	104-key anti-bacterial keyboard (PS/2 connector)	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi	
Power supply	280 watts, universal, manual switch	
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® Vista® Home Premium 64♦ Vista Basic logo		Limited Warranty¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
Preloaded applications⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2007• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• Corel® WinDVD® (DVD±RW)• CyberLink Power2Go (DVD±RW)		

See footnotes for important warranty information

US models announced March 17, 2009; previous models on February 24, 2009

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(KW3-1) March 2009

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	DIMM capacity	Media reader	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	Vista preload	Avail date
5359-1BU	4x5	E2220	2.40	1MB	2	5GB	(2, 2, 1)	16-in-1	500GB ²	DVD±RW	GMA 3100				Prem 64	Jan 09
5359-2EU	4x5	E5200	2.50	2MB	2	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100				Prem 64	Jan 09
5359-2BU	4x5	E5200	2.50	2MB	2	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100				Prem 64	Jan 09
5359-3EU	4x5	E7300	2.66	3MB	2	6GB	(2, 2, 2)	16-in-1	1TB	DVD±RW	GMA 3100			11b/g	Prem 64	Jan 09
5359-3AU	4x5	E7400	2.80	3MB	2	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100				Prem 64	Jan 09
5359-4CU	4x5	Q8200	2.33	4MB	4	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100				Prem 64	Jan 09
5359-4DU	4x5	Q8200	2.33	4MB	4	8GB	(2, 2, 2, 2)	16-in-1	1TB	DVD±RW	9300 GE			11b/g	Prem 64	Jan 09
5359-4GU	4x5	Q8200	2.33	4MB	4	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100				Prem 64	Feb 09
5359-5AU	4x5	Q9400	2.66	6MB	4	8GB	(2, 2, 2, 2)	16-in-1	1TB	Blu-ray	9300 GE	TV	Remote	11b/g	Prem 64	Jan 09

- **Antibacterial keyboard uses special material on the surface of the keys to restrain bacterial growth**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**

Processor	Intel® Pentium® Processor E2220 or E5200 with dual-core , 800MHz system bus; <i>E2220</i> : 1MB L2 cache; <i>E5200</i> : 2MB L2 cache or Intel Core™ 2 Duo Processor E7300 or E7400 with dual-core 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q8200 or Q9400 with quad-core (dual-core on dual-die), 1333MHz system bus; <i>Q8200</i> : 4MB L2 cache; <i>Q9400</i> : 6MB L2 cache		Tower <ul style="list-style-type: none">• Black color bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention	
Implementation	Processor in FC-LGA6 package in LGA775 socket			
Memory	5GB, 6GB, or 8GB std. , 8GB max ⁸ , PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, four 240-pin DIMM sockets		Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk	
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 3100 (GMA 3100) , integrated graphics in G33, uses main memory, one 15-pin analog VGA DB-15 connector <i>Some:</i> NVIDIA® GeForce® 9300 GE , PCI Express® x16, 512MB memory, DirectX® 10, TurboCache, PureVideo™ HD technology, S-video out for TV-out, VGA DB-15 connector, DVI-I connector, HDCP-compliant		Slot 1: half-length,full-height, PCI Express x16 Ver 1.1 ** Slot 2: half-length,full-height, PCI Express x1 Ver 1.1 * Slot 3: half-length,full-height, PCI Express x1 Ver 1.1 * Slot 4: half-length,full-height, 32-bit PCI Ver 2.3	
SATA disk	500GB, 640GB, or 1TB SATA 3Gb/s, 7200 rpm			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DH			
SATA DVD±RW	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA Blu-ray™	<i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, DVD and CD recordable			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			
EIDE controller	None			
Diskette drive	None			
Media reader	16-in-1 media reader, internal USB 2.0			
Chipset	Intel G33 Express Chipset (PCI Express® x16), I/O Controller Hub 9 Digital Home [ICH9DH] (SATA 3.0Gb/s, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), <i>4DU/5AU</i> : monitor (VGA DB-15, DVI-I), S-Video out; <i>Others</i> : monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm), SPDIF-out			
Audio	High Definition (HD) audio, ADI1988 codec			
External speakers	None			
Internal speaker	None			
Ethernet	Gigabit ethernet on planar, Intel 82256GC			
Wireless	<i>Some:</i> 11b/g wireless ⁴ , Broadcom® BCM4312, PCIe x1 adapter			
Modem	None			
Security chip	None			
TV tuner	<i>Some:</i> Hybrid tuner, support analog (NTSC) and digital (ATSC) signal , Hauppauge WinTV-HVR-1250,PCIe x 1			
Remote control	<i>Some:</i> Philips® Vista MCE remote control (40-button), IR receiver via USB			
Camera	None			
Keyboard	104-key antibacterial keyboard (PS/2 connector)			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi			
Power supply	280 watts, universal, manual switch			
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® Vista® Home Premium 64✧ <i>5359-4DU/5AU</i>: Vista Premium logo✧ <i>Others</i>: Vista Basic logo		Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2008• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• Corel® WinDVD® (DVD±RW, Blu-ray)• CyberLink Power2Go (DVD±RW, Blu-ray)		



Available at these retailers

- lenovo.com
- Fry's

Limited Warranty¹

- 1-year parts and labor
- Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
- Service upgrade options (in eligible locations):
 - 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)
- 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686



Available at these retailers

- lenovo.com
- Fry's

Limited Warranty¹

- ≈ **1-year parts and labor**
- ≈ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ≈ **Service upgrade options (in eligible locations):⁹**
 - **3-year Lenovo Onsite Repair 9x5 Next Business Day** (78Y1553)
- ≈ **24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686**


See footnotes for important warranty information

Ⓜ US model announced February 24, 2009; previous models on January 13, 2009

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(KW3-2) March 2009

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	DIMM capacity	Media reader	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	Vista preload	Avail date
5359-2HU	4x5	E5200	2.50	2MB	2	6GB	(2, 2, 2)	16-in-1	500GB ²	DVD±RW	GMA 3100				Prem 64	Aug 09
5359-3NU	4x5	E7500	2.93	3MB	2	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100			11b/g	Prem 64	Aug 09
5359-3JU	4x5	E7500	2.93	3MB	2	6GB	(2, 2, 2)	16-in-1	500GB	DVD±RW	GMA 3100				Prem 64	Aug 09
5359-3LU	4x5	E7500	2.93	3MB	2	8GB	(2, 2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100				Prem 64	Aug 09
5359-4PU	4x5	Q8200	2.33	4MB	4	6GB	(2, 2, 2)	16-in-1	640GB	DVD±RW	GMA 3100	TV	Remote	11b/g	Prem 64	Aug 09
5359-4QU	4x5	Q8200	2.33	4MB	4	8GB	(2, 2, 2, 2)	16-in-1	1TB	DVD±RW	9300 GE			11b/g	Prem 64	Aug 09

- Antibacterial keyboard uses special material on the surface of the keys to restrain bacterial growth
- Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows

Processor	Intel® Pentium® Processor E5200 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q8200 with quad-core (dual-core on dual-die), 1333MHz system bus, and 4MB L2 cache Processor in FC-LGA6 package in LGA775 socket		Tower <ul style="list-style-type: none">• Black color bezel• 7.1" W X 17.0" D X 15.0" H• 180mm W X 432mm D X 380mm H• 21.5 lb (9.75 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention		
Implementation					
Memory	6GB or 8GB std , 8GB max ⁸ , PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, four 240-pin DIMM sockets				
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 3100 (GMA 3100) , integrated graphics in G33, uses main memory, one 15-pin analog VGA DB-15 connector <i>Some:</i> NVIDIA® GeForce® 9300 GE , PCI Express® x16, 512MB memory, DirectX® 10, TurboCache, PureVideo™ HD technology, S-video out for TV-out, VGA DB-15 connector, DVI-I connector, HDCP-compliant		Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 media reader Bay ④ 3.5", 1" high, no access, standard disk Bay ⑤ 3.5", 1" high, no access, optional disk Slot 1: half-length,full-height, PCI Express x16 Ver 1.1 ** Slot 2: half-length,full-height, PCI Express x1 Ver 1.1 * Slot 3: half-length,full-height, PCI Express x1 Ver 1.1 * Slot 4: half-length,full-height, 32-bit PCI Ver 2.3 * Wireless adapter or TV tuner in slot in some models ** used in some models		
SATA disk	500GB, 640GB , or 1TB SATA 3Gb/s, 7200 rpm				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DH				
SATA DVD±RW	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors				
EIDE controller	None				
Diskette drive	None				
Media reader	16-in-1 media reader, internal USB 2.0				
Chipset	Intel G33 Express Chipset (PCI Express® x16), I/O Controller Hub 9 Digital Home [ICH9DH] (SATA 3.0Gb/s, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), <i>4QU:</i> monitor (VGA DB-15, DVI-I), S-Video out; <i>Others:</i> monitor (VGA DB-15)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm), SPDIF-out				
Audio	High Definition (HD) audio, ADI1988 codec				
External speakers	None				
Internal speaker	None				
Ethernet	Gigabit ethernet on planar, Intel 82256GC				
Wireless	<i>Some:</i> 11b/g wireless ⁴ , Broadcom® BCM4312, PCIe x1 adapter				
Modem	None				
Security chip	None				
TV tuner	<i>Some:</i> Hybrid tuner, support analog (NTSC) and digital (ATSC) signal , Hauppauge WinTV-HVR-1250,PCIe x 1				
Remote control	<i>Some:</i> Philips® Vista MCE remote control (40-button), IR receiver via USB				
Camera	None				
Keyboard	104-key antibacterial keyboard (PS/2 connector)				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi				
Power supply	280 watts, universal, manual switch				
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® Vista® Home Premium 64✧ <i>5359-4QU:</i> Vista Premium logo✧ <i>Others:</i> Vista Basic logo		Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• Trend Micro™ PC-cillin™ Internet Security 2008• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• Corel® WinDVD® (DVD±RW)• CyberLink Power2Go (DVD±RW)			
		Limited Warranty ¹ <ul style="list-style-type: none">➤ 1-year parts and labor➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)➤ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686			



Limited Warranty¹

- ⇒ 1-year parts and labor
- ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
- ⇒ Service upgrade options (in eligible locations):⁹
 - 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)
- ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686


See footnotes for important warranty information
 US models announced August 19, 2009

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 (KW3-3) August 2009

Type-model	Slot x bay	Pro-cessor	GHz	Max turbo (GHz)	Cache	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	Win 7 preload	Avail date
7727-1SU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx3	1TB ²	DVD±RW	GeForce GT 420	None	None	None	Prem 64	Feb 11
7727-1TU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx2	1TB	DVD±RW	GeForce GT 420	None	None	None	Prem 64	Feb 11
7727-2KU	4x4	i5-2300	2.80	3.10	6MB	4	4GBx2	1TB	DVD±RW	GeForce GT 420	None	None	None	Prem 64	Feb 11
7727-2LU	4x4	i5-2300	2.80	3.10	6MB	4	2GBx3	1TB	DVD±RW	GeForce GT 420	None	None	None	Prem 64	Feb 11
7727-4HU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx3	1.5TB	DVD±RW	Radeon HD 6450	None	None	11b/g/n	Prem 64	Jul 11

- **Power control switch on front to adjust power and energy for three modes (cool, auto, and turbo)**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i5-2300 Processor (4 cores / 4 threads, 2.80 GHz, 6M Cache) Turbo Boost Technology 2.0 (up to 3.10 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600 Processor (4 cores / 8 threads, 3.40 GHz, 8M Cache), Turbo Boost Technology 2.0 (up to 3.80 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Power Dial• CyberLink Power2Go (DVD±RW)• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Windows Live Essentials• Backtrack	
Implementation	Processor in LGA1155 socket			
Memory	16GB max ⁸ , dual-channel capable, PC3-10600 1333MHz DDR3 , non-parity, four 240-pin DIMM sockets			
Graphics	<i>Some:</i> NVIDIA® GeForce® GT 420 , PCI Express® x16, 1GB memory, Direct [®] 11, NVIDIA CUDA™ Technology, one VGA DB-15 connector, one HDMI connector, HDCP-compliant <i>Some:</i> AMD Radeon™ HD 6450 , PCI Express x16, 1GB memory, DirectX 11, one VGA DB-15 connector, one HDMI connector, HDCP-compliant			
SATA disk	1TB or 1.5TB , SATA 3.0Gb/s, 7200 rpm			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0 support			
SATA optical	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 3.0Gb/s connectors, two SATA 6.0Gb/s connectors, and one eSATA connector			
EIDE controller	None			
Diskette drive	None			
Media reader	16-in-1 media reader, internal USB 2.0			
Chipset	Intel P67 Express Chipset			
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Six USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), one eSATA, monitor (VGA DB-15, HDMI)			
Rear audio ports	Line-in (3.5mm), line-out [Front out L/R] (3.5mm), microphone-in (3.5mm), Cen/LFE (3.5mm), Rear out L/R (3.5mm), Side surround out L/R (3.5mm)			
Audio	High Definition (HD) audio, ALC892 codec			
External speakers	None			
Internal speaker	None			
Wireless	<i>Some:</i> 11b/g/n wireless ⁴ , Realtek® RTL8818CE, PCIe x1 adapter			
Ethernet	Gigabit ethernet on planar, Intel 82579			
Modem	None			
Security chip	None			
TV tuner	None			
Remote control	None			
Camera	None			
Keyboard	Full-size keyboard (PS/2 connector), Fn keys, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	280 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">• Black bezel• 7.09" W X 17.32" D X 15.35" H• 180mm W X 440mm D X 390mm H• 24.6 lb (11.2 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay ① 5.25", 1.6" high, access, standard optical			
Slot	Bay ② 5.25", 1.6" high, access, open			
	Bay ③ 3.5", 1" high, no access, standard disk			
	Bay ④ 3.5", 1" high, no access, optional disk			
	Slot 1: half-length, full-height, PCI Express x16 Ver 2.0 **			
	Slot 2: half-length, full-height, PCI Express x16 Ver 2.0 **			
	Slot 3: half-length, full-height, PCI Express x1 Ver 2.0 *			
	Slot 4: half-length, full-height, PCI Express x1 Ver 2.0 *			
	* Wireless adapter or TV tuner in slot in some models			
	** Graphics adapter in slot in some models			



Limited Warranty¹	
⇨	1-year parts and labor
⇨	Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)
⇨	Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)
⇨	24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686


See footnotes for important warranty information

US model announced July 6, 2011; previous models on February 16, 2011

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(TNA4-1) July 2011

Type-model	Slot x bay	Pro-cessor	GHz	Max turbo (GHz)	Cache	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	USB3.0	Win 7 preload	Avail date
7727-4GU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx3	1TB ²	DVD±RW	GeForce GT 420	None	None			Prem 64	Apr 11
7727-4FU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx2	1TB	DVD±RW	GeForce GT 420	None	None			Prem 64	Apr 11
7727-4EU	4x4	i5-2300	2.80	3.10	6MB	4	4GBx2	1TB	DVD±RW	GeForce GT 420	None	None			Prem 64	Apr 11
7727-4DU	4x4	i5-2300	2.80	3.10	6MB	4	2GBx3	1TB	DVD±RW	GeForce GT 420	None	None			Prem 64	Apr 11
7727-5CU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx3	2TB	Blu-ray	Radeon HD 6450	None	None	11b/g/n	USB3.0	Prem 64	Nov 11
7727-5DU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx3	1.5TB	DVD±RW	Radeon HD 6450	None	None	11b/g/n	USB3.0	Prem 64	Nov 11

- **Power control switch on front to adjust power and energy for three modes (cool, auto, and turbo)**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i5-2300 Processor (4 cores / 4 threads, 2.80 GHz, 6M Cache) Turbo Boost Technology 2.0 (up to 3.10 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600 Processor (4 cores / 8 threads, 3.40 GHz, 8M Cache) , Turbo Boost Technology 2.0 (up to 3.80 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Power Dial• CyberLink Power2Go (DVD±RW, Blu-ray)• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Windows Live Essentials• Backtrack	
Implementation				
Memory	16GB max ⁸ , dual-channel capable, PC3-10600 1333MHz DDR3 , non-parity, four 240-pin DIMM sockets			
Graphics	<i>Some:</i> NVIDIA® GeForce® GT 420 , PCI Express® x16, 1GB memory, DirectX® 11, one VGA connector, one HDMI connector, HDCP-compliant <i>Some:</i> AMD Radeon™ HD 6450 , PCI Express x16, 1GB memory, DirectX 11, one VGA connector, one HDMI connector, HDCP-compliant			
SATA disk	1TB, 1.5TB, or 2TB SATA 3 0Gb/s, 7200 rpm			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0 support			
SATA optical	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray media burning), BD-ROM, DVD / CD recordable			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 3.0Gb/s connectors, two SATA 6.0Gb/s connectors, and one eSATA connector			
EIDE controller	None			
Diskette drive	None			
Media reader	16-in-1 media reader, internal USB 2.0			
Chipset	Intel P67 Express Chipset			
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Six USB 2.0, two USB 3.0 on some models, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), one eSATA, monitor (VGA DB-15, HDMI)			
Rear audio ports	Line-in (3.5mm), line-out [Front out L/R] (3.5mm), microphone-in (3.5mm), Cen/LFE (3.5mm), Rear out L/R (3.5mm), Side surround out L/R (3.5mm)			
Audio	High Definition (HD) audio, ALC892 codec			
External speakers	None			
Internal speaker	None			
Wireless	<i>Some:</i> 11b/g/n wireless ⁴ , Realtek® RTL8818CE, PCIe x1 adapter			
Ethernet	Gigabit ethernet on planar, Intel 82579			
Modem	None			
Security chip	None			
TV tuner	None			
Remote control	None			
Camera	None			
Keyboard	Full-size keyboard (PS/2 connector), Fn keys, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	280 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">• Black bezel• 7.09" W X 17.32" D X 15.35" H• 180mm W X 440mm D X 390mm H• 24.6 lb (11.2 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention		Limited Warranty ¹ ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm) ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553) ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686	
Bay	Bay ① 5.25", 1.6" high, access, standard optical			
Slot	Bay ② 5.25", 1.6" high, access, open			
	Bay ③ 3.5", 1" high, no access, standard disk			
	Bay ④ 3.5", 1" high, no access, optional disk			
	Slot 1: half-length, full-height, PCI Express x16 Ver 2.0 **			
	Slot 2: half-length, full-height, PCI Express x16 Ver 2.0 **			
	Slot 3: half-length, full-height, PCI Express x1 Ver 2.0 *			
	Slot 4: half-length, full-height, PCI Express x1 Ver 2.0 *			
	* Wireless adapter or TV tuner in slot in some models			
	** Graphics adapter in slot in some models			

See footnotes for important warranty information

US models announced November 23, 2011, previous models on April 7, 2011

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(TNA4-3) November 2011

Type-model	Slot x bay	Pro-cessor	GHz	Max turbo (GHz)	Cache	Cores	Memory ^a	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	AC adapter	Win 7 preload	Avail date
7727-3FU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx3	2TB ²	Blu-ray	NVIDIA GTX 460	None	None	None	450W	Prem 64	Mar 11
7727-3GU	4x4	i5-2500	3.30	3.70	6MB	4	4GBx2	1TB	Blu-ray	NVIDIA GT 440	None	None	None	280W	Prem 64	Mar 11
7727-3HU	4x4	i5-2300	2.80	3.10	6MB	4	2GBx3	1TB	DVD±RW	ATI HD 5750	None	None	None	450W	Prem 64	Mar 11

- **Power control switch on front to adjust power and energy for three modes (cool, auto, and turbo)**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i5-2300 Processor (4 cores / 4 threads, 2.80 GHz, 6M Cache) Turbo Boost Technology 2.0 (up to 3.10 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500 Processor (4 cores / 4 threads, 3.30 GHz, 6M Cache) Turbo Boost Technology 2.0 (up to 3.70 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600 Processor (4 cores / 8 threads, 3.40 GHz, 8M Cache), Turbo Boost Technology 2.0 (up to 3.80 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket										Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications⁵ (only some listed) • Lenovo® OneKey Recovery • Driver and Application Installation • McAfee® VirusScan® Plus (60 days of virus definitions) • Lenovo Power Dial • CyberLink Power2Go (DVD±RW, Blu-ray) • Corel® WinDVD® (Blu-ray) • Microsoft Office 2010 preloaded; purchase product key to activate • Lenovo Dynamic Brightness System • Lenovo Eye Distance System • Windows Live Essentials • Lenovo Power Dial • Backtrack						
Implementation																	
Memory	16GB max ^a , dual-channel capable, PC3-10600 1333MHz DDR3 , non-parity, four 240-pin DIMM sockets																
Graphics	<i>Some:</i> NVIDIA® GeForce® GTX 460 , PCI Express® x16, 1GB memory, DirectX® 11, occupy two slots, two DVI-I, one mini HDMI, HDCP-compliant <i>Some:</i> NVIDIA GeForce GT 440 , PCI Express x16, 1.5GB memory, DirectX 11, one VGA connector, one DVI-I connector, one HDMI connector, HDCP-compliant <i>Some:</i> ATI™ Radeon™ HD 5750 , PCI Express x16, 1GB memory, DirectX 11, occupy two slots, one VGA, one HDMI, HDCP-compliant																
SATA disk	1TB or 2TB , SATA 3.0Gb/s, 7200 rpm																
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0 support																
SATA optical	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray media burning), BD-ROM, DVD / CD recordable																
SATA cables	Two SATA cables (each 1-drop to device), two SATA 3.0Gb/s connectors, two SATA 6.0Gb/s connectors, and one eSATA connector																
Diskette drive	None																
Media reader	16-in-1 media reader, internal USB 2.0																
Chipset	Intel P67 Express Chipset																
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)																
Rear ports	Six USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), one eSATA																
Rear audio ports	Line-in (3.5mm), line-out [Front out L/R] (3.5mm), microphone-in (3.5mm), Cen/LFE (3.5mm), Rear out L/R (3.5mm), Side surround out L/R (3.5mm)																
Audio	High Definition (HD) audio, ALC892 codec																
Speaker	None																
Wireless	None																
Ethernet	Gigabit ethernet on planar, Intel 82579																
Modem	None																
Security chip	None																
TV tuner	None																
Remote control	None																
Camera	None																
Keyboard	Full-size keyboard (PS/2 connector), Fn keys, black																
Mouse	Optical Wheel Mouse (USB connector), black																
Power supply	<i>Some:</i> 280 watts, universal, manual switch <i>Some:</i> 450 watts, universal, auto-sensing																
Machine	• Black bezel • 7.09" W X 17.32" D X 15.35" H; 180mm W X 440mm D X 390mm H • 24.6 lb (11.2 kg) • Toolless cover removal • Toolless disk, optical drive removal • Toolless adapter retention																
Bay	Bay ① 5.25", 1.6" high, access, standard optical																
Slot	Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, no access, standard disk Bay ④ 3.5", 1" high, no access, optional disk Slot 1: half-length, full-height, PCI Express x16 Ver 2.0 ** Slot 2: half-length, full-height, PCI Express x16 Ver 2.0 ** Slot 3: half-length, full-height, PCI Express x1 Ver 2.0 * Slot 4: half-length, full-height, PCI Express x1 Ver 2.0 * * Wireless adapter or TV tuner in slot in some models ** Graphics adapter in slot in some models, some graphics adapters occupy two slots																



Limited Warranty¹

- **1-year parts and labor**
- **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)**
- **Service upgrade options (in eligible locations):⁹**
 - **2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)**
 - **3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)**
- **24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686**

Type-model	Slot x bay	Pro-cessor	GHz	Max turbo (GHz)	Cache	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	USB3.0	Win 7 preload	Avail date
7747-1EU	4x4	i3-2100	3.10	3.20	3MB	2	2+4GB	1TB ²	DVD±RW	Intel HD 2000	None	None			Prem 64	Aug 11
7747-1KU	4x4	i5-2310	2.90	3.20	6MB	4	2+4GB	1TB	DVD±RW	Intel HD 2000	None	None			Prem 64	Aug 11
7747-1QU	4x4	i5-2310	2.90	3.20	6MB	4	4GBx2	1.5TB	DVD±RW	Radeon HD 6450	None	None	11b/g/n		Prem 64	Aug 11
7747-1GU	4x4	i7-2600	3.40	3.80	8MB	4	4GBx2	1.5TB	DVD±RW	Radeon HD 6450	None	None	11b/g/n		Prem 64	Aug 11
7747-2AU	4x4	i3-2120	3.30	3.30	3MB	2	2+4GB	1TB	DVD±RW	Intel HD 2000	None	None	11b/g/n	USB3.0	Prem 64	Nov 11
7747-2BU	4x4	i5-2320	3.00	3.30	6MB	4	4GBx2	1TB	DVD±RW	Intel HD 2000	None	None	11b/g/n	USB3.0	Prem 64	Nov 11
7747-2CU	4x4	i5-2320	3.00	3.30	6MB	4	4GBx2	1.5TB	DVD±RW	Radeon HD 6450	None	None	11b/g/n	USB3.0	Prem 64	Nov 11
7747-2DU	4x4	i5-2320	3.00	3.30	6MB	4	4GBx2	2TB	Blu-ray	Radeon HD 6450	None	None	11b/g/n	USB3.0	Prem 64	Nov 11

- Power control switch on front to adjust power and energy for three modes (cool, auto, and turbo)
- Lenovo Rescue System provides OneKey recovery without booting into Windows
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.10 GHz, 3M Cache), DDR3 memory controller (up to 1333MHz) Intel Core i3-2120 Processor (2 cores / 4 threads, 3.30 GHz, 3M Cache), DDR3 memory controller (up to 1333MHz) Intel Core i5-2310 Processor (4 cores / 4 threads, 2.90 GHz, 6M Cache), Turbo Boost Technology 2.0 (up to 3.20 GHz), DDR3 memory controller (up to 1333MHz) Intel Core i5-2320 Processor (4 cores / 4 threads, 3.00 GHz, 6M Cache), Turbo Boost Technology 2.0 (up to 3.30 GHz), DDR3 memory controller (up to 1333MHz) Intel Core i7-2600 Processor (4 cores / 8 threads, 3.40 GHz, 8M Cache), Turbo Boost Technology 2.0 (up to 3.80 GHz), DDR3 memory controller (up to 1333MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ⁵ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Power Dial• CyberLink Power2Go (DVD±RW, Blu-ray)• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Windows Live Essentials• Backtrack	
Implementation	Processor in LGA1155 socket			
Memory	8GB max ⁸ , dual-channel capable, PC3-10600 1333MHz DDR3 , non-parity, two 240-pin DIMM sockets			
Graphics	<i>Some:</i> Intel HD Graphics 2000, integrated in processor, uses main memory, DirectX® 10.1, one VGA connector, one HDMI connector, HDCP-compliant <i>Some:</i> AMD Radeon™ HD 6450, PCI Express x16, 1GB memory, DirectX 11, one VGA connector, one HDMI connector, HDCP-compliant			
SATA disk	1TB, 1.5TB, or 2TB, SATA 3.0Gb/s, 7200 rpm			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA optical	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray media burning), BD-ROM, DVD / CD recordable			
SATA cables	Two SATA cables (each 1-drop to device), four SATA 3.0Gb/s connectors			
EIDE controller	None			
Diskette drive	None			
Media reader	16-in-1 media reader, internal USB 2.0			
Chipset	Intel H61 Express Chipset			
Front ports	Two USB 2.0, microphone (3.5mm), headphone (3.5mm)			
Rear ports	Four USB 2.0, two USB 3.0 on some models, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, HDMI)			
Rear audio ports	Line-in (3.5mm), line-out (3.5mm), microphone-in (3.5mm), High Definition (HD) audio, ALC662 codec			
Audio				
External speakers	None			
Internal speaker	None			
Wireless	<i>Some:</i> 11b/g/n wireless ⁴ , Realtek® RTL8818CE, PCIe x1 adapter			
Ethernet	Gigabit ethernet on planar, Intel 82579V			
Modem	None			
Security chip	None			
TV tuner	None			
Remote control	None			
Camera	None			
Keyboard	Full-size keyboard (PS/2 connector), Fn keys, black			
Mouse	Optical Wheel Mouse (USB connector), black			
Power supply	280 watts, universal, manual switch			
Machine	<ul style="list-style-type: none">• Black bezel• 7.09" W X 17.32" D X 15.35" H• 180mm W X 440mm D X 390mm H• 24.6 lb (11.2 kg)• Toolless cover removal• Toolless disk, optical drive removal• Toolless adapter retention			
Bay	Bay ① 5.25", 1.6" high, access, standard optical			
Slot	Bay ② 5.25", 1.6" high, access, open			
	Bay ③ 3.5", 1" high, no access, standard disk			
	Bay ④ 3.5", 1" high, no access, optional disk			
	Slot 1: half-length,full-height, PCI Express x16 Ver 2.0 **			
	Slot 2: half-length,full-height, PCI Express x1 Ver 2.0 *			
	Slot 3: half-length,full-height, PCI Express x1 Ver 2.0 *			
	Slot 4: half-length,full-height, PCI Express x1 Ver 2.0 *			
	* Wireless adapter or TV tuner in slot in some models			
	** Graphics adapter in slot in some models			



Limited Warranty ¹	
➤	1-year parts and labor
➤	Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm)
➤	Service upgrade options (in eligible locations): ⁹
	• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)
	• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)
➤	24x7 ¹⁴ toll-free support for warranty issues during the warranty period ¹ via 877-453-6686

See footnotes for important warranty information

US models announced November 23, 2011, previous models on August 10, 2011

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Lenovo IdeaCentre A300



Lenovo IdeaCentre A300



Lenovo IdeaCentre A300



Lenovo IdeaCentre A300



Lenovo IdeaCentre A300



Lenovo IdeaCentre A300
Wireless keyboard and mouse

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Graphics	SATA disk	External optical	PCIe Mini Card 802.11	TV tuner	Remote control	Bluetooth	KBD/ Mouse	Win7 preload	Avail date
4018-1DU	T4400	2.20	3GB	21.5" WUXGA	0.3M	GMA 4500MHD	320GB ⁸	None	11b/g/n ²⁸		None	Bluetooth	BT/BT	Prem 64	Mar 10
4018-1EU	T6600	2.20	4GB	21.5" WUXGA	0.3M	GMA 4500MHD	500GB	None	11b/g/n	TV	None	Bluetooth	BT/BT	Prem 64	Mar 10

- **All-In-One design with 21.5" Full HD 16:9 widescreen, glossy display**
- **(Selected models) Integrated TV tuner**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**

Processor	Intel® Pentium® Processor T4400 with dual-core, 800MHz system bus, and 1MB L2 cache or Intel Core™ 2 Duo processor T6600 with dual-core, 800MHz system bus, and 2MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Media Show• Lenovo CamSuite• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live™ Essential• Microsoft® Office 2007 Trial (60-day)
Memory	3GB or 4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available		
External DVD±RW	None		
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 2.5" wide, 5400 rpm		
Widescreen display	21.5" (546.1mm) WUXGA (1920x1080) TFT color, VibrantView (glossy), CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone		
Controls	Touch-sensitive buttons for brightness control, Novo Vision (internet / video / text), mode switch (panel off / PC / HDMI IN)		
Graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , integrated graphics in GM45, uses main memory, DirectX® 10		
Chipset	Mobile Intel GM45 Express Chipset , ICH9M I/O Controller Hub		
Multicard reader	8-in-1 reader (MultiMedia Card, RS-MMC, Memory Stick, Memory Stick PRO™, Memory Stick Duo, Secure Digital Card, miniSD, xD-Picture Card™)		
Ports	<i>Rear:</i> Two USB 2.0, ethernet (RJ-45), TV antenna connector on some models; IEEE 1394 FireWire 400 (4-pin connector), HDMI in/out <i>Side:</i> Two USB 2.0		
PCIe Mini Card	Two PCIe Mini Card slots		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom® chip or Atheros chip		
TV tuner	<i>Some:</i> AverMedia® Hybrid tuner, support analog and digital signal, PCIe Mini Card		
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator		
Modem	None		
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL		
Audio support	High Definition (HD) Audio, Realtek ALC272 codec / stereo speakers (2 watt x 2) / mono microphone, microphone input jack (3.5 mm), headphone jack / S/PDIF-out (3.5 mm)		
Security	Power-on password, supervisor password, security lockhole		
Keyboard	Wireless keyboard via Bluetooth®, 6-row, multimedia Fn keys, white		
Mouse	Wireless laser mouse via Bluetooth, 1200 dpi, white		
Remote control	None		
Dimensions ³	<i>With base (WxHxD):</i> 20.63" x 15.59" x 8.27"; 524mm x 396mm x 210mm <i>Screen depth:</i> 0.73"; 18.5mm		
Weight ²	22.9 lb (10.4 kg)		
Chassis	White color, ABS plastic		
View adjustments	<i>Tilt:</i> 18° back, 3° forward; <i>swivel:</i> +/-10°		

120-watt AC adapter RoHS-compliant
Limited Warranty ¹ <ul style="list-style-type: none">➤ 1-year parts and labor➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)➤ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

See footnotes for important warranty information
US models announced March 11, 2010

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(SMU1-2) March 2010

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Graphics	SATA disk	External optical	PCIe Mini Card 802.11	TV tuner	Remote control	Bluetooth	KBD/ Mouse	Win7 preload	Avail date
4018-1MU	T4400	2.20	2GB	21.5" WUXGA	0.3M	GMA 4500MHD	320GB ⁸	None	11b/g/n ²⁸	TV	None	Bluetooth	BT/BT	Prem 64	Mar 10
4018-1NU	T4400	2.20	4GB	21.5" WUXGA	0.3M	GMA 4500MHD	500GB	None	11b/g/n	TV	None	Bluetooth	BT/BT	Prem 64	Mar 10
4018-1OU	T6600	2.20	4GB	21.5" WUXGA	0.3M	GMA 4500MHD	500GB	None	11b/g/n	TV	None	Bluetooth	BT/BT	Prem 64	Mar 10
4018-4BU	T6570	2.10	4GB	21.5" WUXGA	0.3M	GMA 4500MHD	500GB	None	11b/g/n	TV	None	Bluetooth	BT/BT	Prem 64	Feb 11

- **All-In-One design with 21.5" Full HD 16:9 widescreen, glossy display**
- **(Selected models) Integrated TV tuner**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**

Processor	Intel® Pentium® Processor T4400 with dual-core, 800MHz system bus, and 1MB L2 cache or Intel Core™ 2 Duo processor T6570 or T6600 with dual-core, 800MHz system bus, and 2MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64
Memory	2GB or 4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available <i>Italics:</i> standard memory in both sockets; no sockets available		Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Media Show• Lenovo CamSuite• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live™ Essential• Microsoft® Office 2007 Trial (60-day)
External DVD±RW	None		
SATA disk	320GB or 500GB, SATA 3.0Gb/s, 2.5" wide, 5400 rpm		
Widescreen display	21.5" (546.1mm) WUXGA (1920x1080) TFT color, VibrantView (glossy), CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone		
Controls	Touch-sensitive buttons for brightness control, Novo Vision (internet / video / text), mode switch (panel off / PC / HDMI IN)		
Graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), integrated graphics in GM45, uses main memory, DirectX® 10		
Chipset	Mobile Intel GM45 Express Chipset, ICH9M I/O Controller Hub		
Multicard reader	8-in-1 reader (MultiMedia Card, RS-MMC, Memory Stick, Memory Stick PRO™, Memory Stick Duo, Secure Digital Card, miniSD, xD-Picture Card™)		
Ports	Rear: Two USB 2.0, ethernet (RJ-45), TV antenna connector on some models; IEEE 1394 FireWire 400 (4-pin connector), HDMI in/out Side: Two USB 2.0		
PCIe Mini Card	Two PCIe Mini Card slots		120-watt AC adapter RoHS-compliant
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom® chip or Atheros chip		Limited Warranty¹ ⇨ 1-year parts and labor ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm) ⇨ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553) ⇨ 24x7 ¹⁴ toll-free support for warranty issues during the warranty period ¹ via 877-453-6686
TV tuner	AverMedia® Hybrid tuner, support analog and digital signal, PCIe Mini Card		
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator		
Modem	None		
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL		
Audio support	High Definition (HD) Audio, Realtek ALC272 codec / stereo speakers (2 watt x 2) / mono microphone, microphone input jack (3.5 mm), headphone jack / S/PDIF-out (3.5 mm)		
Security	Power-on password, supervisor password, security lockhole		
Keyboard	Wireless keyboard via Bluetooth, 6-row, multimedia Fn keys, white		
Mouse	Wireless laser mouse via Bluetooth, 1200 dpi, white		
Remote control	None		
Dimensions ³	With base (WxHxD): 20.63" x 15.59" x 8.27"; 524mm x 396mm x 210mm Screen depth: 0.73"; 18.5mm		
Weight ²	22.9 lb (10.4 kg)		
Chassis	White color, ABS plastic		
View adjustments	Tilt: 18° back, 3° forward; swivel: +/-10°		

See footnotes for important warranty information

☞ US model announced February 16, 2011; previous models on February 5, 2010

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Type-model	Proc- essor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera (mega- pixel)	Graphics	SATA disk	External optical	PCIe Mini Card 802.11	TV tuner	Remote control	KBD/ Mouse	Win7 preload	Avail date
4073-2DU	P6100	2.00	None	2GBx2	21.5" FHD	LED	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸			BT/BT	Prem 64	Aug 10
4073-2EU	i3-370M	2.40	None	2GBx2	21.5" FHD	LED	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	TV	Remote	BT/BT	Prem 64	Aug 10

- **All-In-One design with 21.5" Full HD 16:9 widescreen, glossy display**
- **(Selected models) Integrated TV tuner**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Pentium® processor P6100 with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), and 3MB cache or Intel® Core™ i3 processor i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache										Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo® OneKey Recovery • Driver and Application Installation • McAfee® VirusScan® Plus (60 days of virus definitions) • CyberLink YouCam • Windows Live™ Essential • Microsoft Office 2010 preloaded; purchase product key to activate • CyberLink Power2Go (DVD±RW)					
Memory	4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets															
External DVD±RW SATA disk	USB 2.0 external DVD burner, tray-in 320GB or 500GB , SATA 3.0Gb/s, 2.5" wide, 5400 rpm															
Widescreen display	21.5" (546.1mm) Full HD (WUXGA 1920x1080) TFT color, VibrantView (glossy), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen															
Camera Controls	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone Touch-sensitive buttons for Menu/OK button and Direction buttons															
Graphics	Intel HD Graphics in processor, external digital monitor support via HDMI out connector, HDCP-compliant															
Chipset	Mobile Intel HM55 Express Chipset															
Multicard reader	7-in-1 reader (MultiMedia Card, RS-MMC, Memory Stick, Memory Stick PRO™, Memory Stick Duo, Secure Digital Card, miniSD)															
Ports	<i>Rear:</i> Two USB 2.0, ethernet (RJ-45), TV tuner connector on some models; HDMI in, HDMI out <i>Side:</i> Two USB 2.0															
PCIe Mini Card 11b/g/n ²⁸	Two PCIe Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® BCM43225 <i>Some:</i> Hybrid tuner, support analog and digital signal, PCIe Mini Card															
TV tuner	Bluetooth 2.1 wireless + EDR, USB 2.0 interface, LED indicator															
Bluetooth®	None															
Modem	Gigabit ethernet on planar, Realtek® RTL8111DL															
Ethernet	High Definition (HD) Audio, Realtek ALC272 codec /															
Audio support	stereo speakers (2 watt x 2) / mono microphone, microphone input jack (3.5 mm), headphone jack / S/PDIF-out (3.5 mm)															
Security	Power-on password, supervisor password, security lockhole															
Keyboard	Wireless keyboard via Bluetooth, 6-row, multimedia Fn keys, white															
Mouse	Wireless laser mouse via Bluetooth, white															
Remote control	<i>Some:</i> MCE remote control, via IR															
Dimensions ³	<i>With base (WxHxD):</i> 20.63" x 15.59" x 8.15"; 524mm x 396mm x 207mm <i>Screen depth:</i> 0.73"; 18.5mm															
Weight ²	15.9 lb (7.2 kg), weight may vary by configuration															
Chassis	White color, ABS plastic															
View adjustments	<i>Tilt:</i> 18° back, 3° forward; <i>swivel:</i> +/-10°															

See footnotes for important warranty information
US models announced August 25, 2010

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(SMU2-1) August 2010

- Limited Warranty¹**
- ⇒ **1-year parts and labor**
 - ⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)**
 - ⇒ **Service upgrade options (in eligible locations):⁹**
 - **2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)**
 - **3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)**
 - ⇒ **24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686**

Type-model	Proc- essor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Camera (mega- pixel)	Graphics	SATA disk	External optical	PCIe Mini Card 802.11	TV tuner	Remote control	KBD/ Mouse	Win7 preload	Avail date
4073-1GU	i3-350M	2.26		2GBx2	21.5" FHD	LED	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸	TV	Remote	BT/BT	Prem 64	Aug 10
4073-1HU	i5-450M	2.40	2.66	2GBx2	21.5" FHD	LED	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	TV	Remote	BT/BT	Prem 64	Aug 10
4073-2FU	i3-370M	2.40		2GBx2	21.5" FHD	LED	0.3M	Intel HD	500GB		11b/g/n			BT/BT	Prem 64	Mar 11
4073-4NU	i5-450M	2.40	2.66	4+2GB	21.5" FHD	LED	0.3M	Intel HD	750GB		11b/g/n	TV	Remote	BT/BT	Prem 64	May 11

- **All-In-One design with 21.5" Full HD 16:9 widescreen, glossy display**
- **(Selected models) Integrated TV tuner**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3 processor i3-350M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or Intel Core i5 processor i5-450M with dual-core , DMI, integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• CyberLink YouCam• Windows Live Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• CyberLink Power2Go (DVD±RW)
Memory	8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
External DVD±RW SATA disk	<i>Some:</i> USB 2.0 external DVD burner, tray-in 320GB, 500GB, or 750GB , SATA 3.0Gb/s, 2.5" wide, 5400 rpm	
Widescreen display	21.5" (546.1mm) Full HD (WUXGA 1920x1080) TFT color, VibrantView (glossy), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen	
Camera Controls	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone Touch-sensitive buttons for Menu/OK button and Direction buttons	
Graphics	Intel HD Graphics in processor, external digital monitor support via HDMI out connector, HDCP-compliant	
Chipset	Mobile Intel HM55 Express Chipset	
Multicard reader	7-in-1 reader (MultiMedia Card, RS-MMC, Memory Stick, Memory Stick PRO™, Memory Stick Duo, Secure Digital Card, miniSD)	
Ports	<i>Rear:</i> Two USB 2.0, ethernet (RJ-45), TV tuner connector on some models; HDMI in, HDMI out <i>Side:</i> Two USB 2.0	
PCIe Mini Card 11b/g/n ²⁸	Two PCIe Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® BCM43225	120-watt AC adapter RoHS-compliant Limited Warranty ¹ <ul style="list-style-type: none">➤ 1-year parts and labor➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)➤ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
TV tuner	<i>Some:</i> Hybrid tuner, support analog and digital signal, PCIe Mini Card	
Bluetooth®	Bluetooth 2.1 wireless + EDR, USB 2.0 interface, LED indicator	
Modem	None	
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL	
Audio support	High Definition (HD) Audio, Realtek ALC272 codec / stereo speakers (2 watt x 2) / mono microphone, microphone input jack (3.5 mm), headphone jack / S/PDIF-out (3.5 mm)	
Security	Power-on password, supervisor password, security lockhole	
Keyboard	Wireless keyboard via Bluetooth, 6-row, multimedia Fn keys, white	
Mouse	Wireless laser mouse via Bluetooth, white	
Remote control	<i>Some:</i> MCE remote control, via IR	
Dimensions ³	<i>With base (WxHxD):</i> 20.63" x 15.59" x 8.15"; 524mm x 396mm x 207mm <i>Screen depth:</i> 0.73"; 18.5mm	
Weight ²	15.9 lb (7.2 kg), weight may vary by configuration	
Chassis	White color, ABS plastic	
View adjustments	<i>Tilt:</i> 18° back, 3° forward; <i>swivel:</i> +/-10°	

See footnotes for important warranty information

ⓘ US model announced May 18, 2011; previous models on August 25, 2010 or March 9, 2011

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Lenovo IdeaCentre A600
(Remote control and wireless
keyboard/mouse on select models)



Lenovo IdeaCentre A600
(Remote control and wireless
keyboard/mouse on select models)



Lenovo IdeaCentre A600



Lenovo IdeaCentre A600



Lenovo IdeaCentre A600



Lenovo IdeaCentre A600

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	TV tuner	Remote control	Micro- phone	Blue- tooth	KBD/ Mouse	Vista preload	Avail date					
3011-2AU	T4200	2.00	2GB	21.5" WUXGA	1.3	GMA	320GB ⁸	DVD±RW	11b/g ²⁸					USB	Prem 64	Apr 09					
3011-2BU	T4200	2.00	3GB	21.5" WUXGA	1.3	GMA	500GB	DVD±RW	Intel 5100					USB	Prem 64	Apr 09					
3011-2CU	T4200	2.00	4GB	21.5" WUXGA	1.3	GMA	640GB	DVD±RW	Intel 5100					USB	Prem 64	Apr 09					
3011-3AU	T6400	2.00	3GB	21.5" WUXGA	1.3	GMA	640GB	DVD±RW	* Intel 5100					USB	Prem 64	Apr 09					
3011-3CU	T6400	2.00	4GB	21.5" WUXGA	2.0	HD 3650	1TB	DVD±RW	* Intel 5100	TV	Remote	Array	Blue	Wireless	Prem 64	Apr 09					
3011-4AU	P7450	2.13	4GB	21.5" WUXGA	2.0	HD 3650	1TB	BD player	÷ Intel 5100			Array	Blue	USB	Prem 64	Apr 09					
3011-4BU	P7450	2.13	4GB	21.5" WUXGA	2.0	HD 3650	1TB	BD player	÷ Intel 5100	TV	4-in-1	Array	Blue	Wireless	Prem 64	Apr 09					
3011-3DU	T6400	2.00	3GB	21.5" WUXGA	1.3	GMA	500GB	DVD±RW	* Intel 5100			Mono		Wireless	Prem 32	Apr 09					
3011-3HU	T6400	2.00	4GB	21.5" WUXGA	2.0	HD 3650	640GB	DVD±RW	* Intel 5100	TV	4-in-1	Array	Blue	Wireless	Prem 64	Apr 09					
<ul style="list-style-type: none">• All-In-One design with 21.5" Full HD 16:9 widescreen, glossy display• (Selected models) Integrated TV tuner• (Selected models) 4-in-1 remote control acts as a motion game controller (requires game support), VOIP handset, Vista Media Center remote and air mouse• Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face• Dolby® Home Theater™ premium audio system with two speakers and one subwoofer• Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows																					
Processor	Intel® Pentium® processor T4200 with dual-core, 800MHz system bus, and 1MB L2 cache or Intel Core™ 2 Duo processor T6400 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core 2 Duo processor P7450 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache											Preloaded operating system ²⁰ <ul style="list-style-type: none">- Some: Genuine Windows® Vista® Home Premium 32- Some: Genuine Windows Vista Home Premium 64 ◇ Vista Premium logo									
Memory	2GB, 3GB, or 4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available <i>Non-italics:</i> standard memory in one socket; one socket available											Preloaded applications ¹⁴ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• Lenovo Recovery Disk Maker• Lenovo Healthcare Software• VeriFace™• Media Show• Trend Micro™ PC-cillin™ Internet Security 2008• Windows Live™ Toolbar• Microsoft® Office 2007 Trial (60-day)• Cyberlink Power2Go (DVD±RW, BD player)• Corel® WinDVD® (BD player)									
SATA DVD±RW	Some: DVD burner, dual-layer support, fixed, not removable, 12.7mm, slot-in																				
SATA Blu-ray™	Some: Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, no HD-DVD playback, DVD recordable, not removable, 12.7mm high, slot-in																				
SATA disk	320GB, 500GB, 640GB, or 1TB, SATA 3.0Gb/s, 3.5" wide, 7200 rpm																				
Widescreen display	21.5" (546.1mm) WUXGA (1920x1080) TFT color, VibrantView (glossy), CCFL backlight, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen																				
Camera	Some: camera on top of screen, 1.3-megapixel, fixed focus, with mono microphone Some: camera on top of screen, 2.0-megapixel, fixed focus, with dual array microphone																				
Controls	Touch-sensitive buttons for brightness, display on/off, and optical disk drive eject																				
Graphics	Some: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), integrated graphics in GM45, uses main memory, DirectX® 10 Some: ATI™ Mobility Radeon™ HD 3650, PCI Express® x16, 512MB memory, DirectX® 10, ATI Avivo™ HD																				
Chipset	Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, ethernet MAC)																				
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital Elite Pro Card, xD-Picture Card™)																				
Ports	Rear: Four USB 2.0, ethernet (RJ-45), TV antenna connector on some models; Left: Two USB 2.0, IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)																				
Mini PCI Express	Two Mini PCI Express slots																Available at these retailers <ul style="list-style-type: none">• lenovo.com• Fry's				
Intel 5100 ²⁸	Some: 11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)																Some: 130-watt (GMA graphics) AC adapter Some: 150-watt (ATI graphics) AC adapter RoHS-compliant				
11b/g ²⁸	Some: 11b/g wireless ⁴ , Mini PCIe adapter, Broadcom® BCM4312																				
TV tuner	Some: AverMedia® Hybrid tuner, support analog and digital signal, Mini PCIe adapter																Limited Warranty ¹² <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686				
Bluetooth™	Some: Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator																				
Modem	None																				
Ethernet	Gigabit ethernet on planar, Broadcom BCM5784																				
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / two speakers (3 watt) and subwoofer (8 watt), Dolby Home Theater Speaker System / mono microphone or dual array microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)																				
Security	Power-on password, hard disk password, supervisor password																				
Keyboard	Some: Wireless RF 2.4 GHz keyboard with touch pad, 6-row, 84-key, touch-sensitive multimedia keys and shortcut keys Some: USB full-size keyboard with USB hub (two USB ports)																				
Mouse	Some: Wireless RF 2.4 GHz Laser Wheel Mouse, 800/1600 dpi (user switchable) Some: USB Optical Wheel Mouse																				
Remote control	Some: Vista MCE remote control (40-button), via IR Some: 4-in-1 remote control, via bluetooth, acts as motion game controller (requires games* support), VOIP headset, Vista MCE remote control, and air mouse * Motion games CD included in 4-in-1 remote control models (requires installation)																				
Dimensions ³	(WxHxD): 20.47" x 18.22" x 1.06" to 2.36"; 520mm x 463mm x 27 to 60mm																				
Weight ²	27.7 lb (12.6 kg)																				
Chassis	Black color, ABS plastic																				
Stand	Tilt stand (15° back, 5° forward)																				

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	TV tuner	Remote control	Micro- phone	Blue- tooth	KBD/ Mouse	Vista preload	Avail date
3011-3LU	T6500	2.10	4GB	21.5" WUXGA	1.3	GMA	640GB ⁸	DVD±RW	* Intel 5100 ²⁸					USB	Prem 64	Sep 09
3011-3RU	T6500	2.10	4GB	21.5" WUXGA	2.0	HD 4650	500GB	DVD±RW	* Intel 5100	TV	Remote	Array	Blue	USB	Prem 64	Sep 09
3011-3UU	T6500	2.10	4GB	21.5" WUXGA	2.0	HD 4650	640GB	DVD±RW	* Intel 5100	TV	4-in-1	Array	Blue	Wireless	Prem 64	Sep 09
3011-4EU	P7350	2.00	4GB	21.5" WUXGA	2.0	HD 4650	1TB	BD player	† Intel 5100	TV	4-in-1	Array	Blue	Wireless	Prem 64	Sep 09

- **All-In-One design with 21.5" Full HD 16:9 widescreen, glossy display**
- **(Selected models) Integrated TV tuner**
- **(Selected models) 4-in-1 remote control acts as a motion game controller (requires game support), VOIP handset, Vista Media Center remote and air mouse**
- **Integrated camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Dolby® Home Theater™ premium audio system with two speakers and one subwoofer**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**

Processor	Intel® Core™ 2 Duo processor T6500 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core 2 Duo processor P7350 with dual-core , Intel HD Boost, 1066MHz system bus, and 3MB L2 cache	Preloaded operating system ²⁰ <ul style="list-style-type: none">Genuine Windows® Vista® Home Premium 64✧ Vista Premium logo Preloaded applications ¹⁴ <ul style="list-style-type: none">Lenovo® OneKey RecoveryDriver and Application InstallationLenovo Recovery Disk MakerLenovo Healthcare SoftwareVeriFace™Media ShowTrend Micro™ PC-cillin™ Internet Security 2008Windows Live™ ToolbarMicrosoft® Office 2007 Trial (60-day)Cyberlink Power2Go (DVD±RW, BD player)Corel® WinDVD® (BD player)
Memory	4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available	
SATA DVD±RW SATA Blu-ray™	<i>Some:</i> DVD burner, dual-layer support, fixed, not removable, 12.7mm, slot-in <i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, no HD-DVD playback, DVD recordable, not removable, 12.7mm high, slot-in	
SATA disk	500GB , 640GB , or 1TB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm	
Widescreen display Camera	21.5" (546.1mm) WUXGA (1920x1080) TFT color, VibrantView (glossy), CCFL backlight, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen <i>Some:</i> camera on top of screen, 1.3-megapixel, fixed focus, with mono microphone <i>Some:</i> camera on top of screen, 2.0-megapixel, fixed focus, with dual array microphone	
Controls	Touch-sensitive buttons for brightness, display on/off, and optical disk drive eject	
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , integrated graphics in GM45, uses main memory, DirectX® 10 <i>Some:</i> ATI™ Mobility Radeon™ HD 4650 , PCI Express® x16, 512MB memory, DirectX® 10, ATI Avivo™ HD	
Chipset	Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, ethernet MAC)	
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital Elite Pro Card, xD-Picture Card™)	
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), TV antenna connector on some models; <i>Left:</i> Two USB 2.0, IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
Mini PCI Express Intel 5100 ²⁸ TV tuner Bluetooth™ Modem Ethernet Audio support	Two Mini PCI Express slots 11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) <i>Some:</i> AverMedia® Hybrid tuner, support analog and digital signal, Mini PCIe adapter <i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator None Gigabit ethernet on planar, Broadcom BCM5784 High Definition (HD) Audio, RealTek® ALC272 codec / two speakers (3 watt) and subwoofer (8 watt), Dolby Home Theater Speaker System / mono microphone or dual array microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)	Available at these retailers <ul style="list-style-type: none">lenovo.com
Security	Power-on password, hard disk password, supervisor password	<i>Some:</i> 130-watt (GMA graphics) AC adapter <i>Some:</i> 150-watt (ATI graphics) AC adapter RoHS-compliant
Keyboard	<i>Some:</i> Wireless RF 2.4 GHz keyboard with touch pad, 6-row, 84-key, touch-sensitive multimedia keys and shortcut keys <i>Some:</i> USB full-size keyboard with USB hub (two USB ports)	Limited Warranty ¹² <ul style="list-style-type: none">✧ 1-year parts and labor✧ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)✧ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)✧ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
Mouse	<i>Some:</i> Wireless RF 2.4 GHz Laser Wheel Mouse, 800/1600 dpi (user switchable) <i>Some:</i> USB Optical Wheel Mouse	
Remote control	<i>Some:</i> Vista MCE remote control (40-button), via IR <i>Some:</i> 4-in-1 remote control, via bluetooth, acts as motion game controller (requires games* support), VOIP headset, Vista MCE remote control, and air mouse * Motion games CD included in 4-in-1 remote control models (requires installation)	
Dimensions ³ Weight ² Chassis Stand	(WxHxD): 20.47" x 18.22" x 1.06" to 2.36"; 520mm x 463mm x 27 to 60mm 27.7 lb (12.6 kg) Black color, ABS plastic Tilt stand (15° back, 5° forward)	

See footnotes for important warranty information
US models announced September 10, 2009

* Intel Centrino® processor technology
† Intel Centrino 2 processor technology

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(BL1-2) September 2009

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	TV tuner	Remote control	Micro- phone	Blue- tooth	KBD/ Mouse	Win7 preload	Avail date
3011-6CU	T4300	2.10	2GB	21.5" WUXGA	1.3	GMA	320GB ⁸	DVD±RW	Intel 5100 ²⁸				Mono	USB	Prem 64	Oct 09
3011-6DU	T4300	2.10	4GB	21.5" WUXGA	2.0	HD 4650	320GB	DVD±RW	11b/g	TV			Array	Blue USB	Prem 64	Oct 09
3011-CGU	T6600	2.20	4GB	21.5" WUXGA	2.0	HD 4650	640GB	DVD±RW	* Intel 5100	TV 4-in-1	Array	Blue	Wireless	Prem 64	Oct 09	
3011-CJU	T6600	2.20	3GB	21.5" WUXGA	2.0	HD 4650	500GB	DVD±RW	* Intel 5100	TV Remote	Array	Blue	USB	Prem 64	Oct 09	
3011-CKU	T6600	2.20	4GB	21.5" WUXGA	2.0	HD 4650	500GB	DVD±RW	* Intel 5100	TV Remote	Array	Blue	Wireless	Prem 64	Oct 09	
3011-4LU	P7550	2.26	4GB	21.5" WUXGA	2.0	HD 4650	1TB	BD player	Intel 5100	TV 4-in-1	Array	Blue	Wireless	Prem 64	Oct 09	

- **All-In-One design with 21.5" Full HD 16:9 widescreen, glossy display**
- **(Seleted models) Integrated TV tuner**
- **(Seleted models) 4-in-1 remote control acts as a motion game controller (requires game support), VOIP handset, Vista Media Center remote and air mouse**
- **Dolby® Home Theater™ premium audio system with two speakers and one subwoofer**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**

Processor	Intel® Pentium® Processor T4300 with dual-core, 800MHz system bus, and 1MB L2 cache or Intel Core™ 2 Duo processor T6600 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core 2 Duo processor P7550 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache										Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) • Lenovo® OneKey Recovery • Lenovo Healthcare Software • Media Show • McAfee VirusScan® Plus (60 days of virus definitions) • Cyberlink Power2Go (DVD±RW, BD player) • Corel® WinDVD® (BD player)					
Memory	2GB, 3GB, or 4GB std / 4GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available <i>Italics:</i> standard memory in both sockets; no sockets available															
SATA DVD±RW	<i>Some:</i> DVD burner, dual-layer support, fixed, not removable, 12.7mm, slot-in															
SATA Blu-ray™	<i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, no HD-DVD playback, DVD recordable, not removable, 12.7mm high, slot-in															
SATA disk	320GB, 500GB, 640GB, or 1TB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm															
Widescreen display	21.5" (546.1mm) WUXGA (1920x1080) TFT color, VibrantView (glossy), CCFL backlight, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen															
Camera	<i>Some:</i> camera on top of screen, 1.3-megapixel, fixed focus, with mono microphone <i>Some:</i> camera on top of screen, 2.0-megapixel, fixed focus, with dual array microphone															
Controls	Touch-sensitive buttons for brightness, display on/off, and optical disk drive eject															
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , integrated graphics in GM45, uses main memory, DirectX® 10 <i>Some:</i> ATI™ Mobility Radeon™ HD 4650 , PCI Express® x16, 512MB memory, DirectX® 10, ATI Avivo™ HD															
Chipset	Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, ethernet MAC)															
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital Elite Pro Card, xD-Picture Card™)															
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), TV antenna connector on some models; <i>Left:</i> Two USB 2.0, IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)															
Mini PCI Express	Two Mini PCI Express slots															
Intel 5100 ²⁸	<i>Some:</i> 11a/b/g/n wireless ⁴ , Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)															
11b/g ¹¹	<i>Some:</i> 11b/g wireless ⁴ , Mini PCIe adapter, Broadcom® BCM4312															
TV tuner	<i>Some:</i> AverMedia® Hybrid tuner, support analog and digital signal, Mini PCIe adapter															
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface via ICH9M, LED indicator															
Modem	None															
Ethernet	Gigabit ethernet on planar, Broadcom BCM5784															
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / two speakers (3 watt) and subwoofer (8 watt), Dolby Home Theater Speaker System / mono microphone or dual array microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)															
Security	Power-on password, hard disk password, supervisor password															
Keyboard	<i>Some:</i> Wireless RF 2.4 GHz keyboard with touch pad, 6-row, 84-key, touch-sensitive multimedia keys and shortcut keys <i>Some:</i> USB full-size keyboard with USB hub (two USB ports)															
Mouse	<i>Some:</i> Wireless RF 2.4 GHz Laser Wheel Mouse, 800/1600 dpi (user switchable) <i>Some:</i> USB Optical Wheel Mouse															
Remote control	<i>Some:</i> MCE remote control (40-button), via IR <i>Some:</i> 4-in-1 remote control, via bluetooth, acts as motion game controller (requires games support), VOIP headset, MCE remote control, and air mouse															
Dimensions ³	(WxHxD): 20.47" x 18.22" x 1.06" to 2.36"; 520mm x 463mm x 27 to 60mm															
Weight ²	27.7 lb (12.6 kg)															
Chassis	Black color, ABS plastic															
Stand	Tilt stand (15° back, 5° forward)															

See footnotes for important warranty information
US models announced October 23, 2009

* Intel Centrino® processor technology
✧ Intel Centrino 2 processor technology

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(BL1-3) October 2009

Some: 130-watt (GMA graphics) AC adapter
Some: 150-watt (ATI graphics) AC adapter
RoHS-compliant

Limited Warranty¹²

- ⇒ **1-year parts and labor**
- ⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ⇒ **Service upgrade options (in eligible locations):⁹**
 - **3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)**
- ⇒ **24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686**



Lenovo IdeaCentre A700
with optional 3-in-1 mouse



Lenovo IdeaCentre A700



Lenovo IdeaCentre A700
with optional 3-in-1 mouse



Lenovo IdeaCentre A700



Lenovo IdeaCentre A700



Lenovo IdeaCentre A700

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Multi-Touch screen	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	TV tuner	Remote control	AC adapter	Wall mount kit	Win7 preload	Avail date
4024-3AU	i3-350M	2.26		4GB	23" FHD	Multi	Intel HD	320GB	DVD±RW	11b/g/n ²⁸	Hybrid	Remote	120W	Mount kit	Prem 64	Jun 10
4024-1AU	i7-720QM	1.60	2.80	4GB	23" FHD	Multi	HD 5650	1TB	DVD±RW	11b/g/n	Hybrid	Remote	150W	Mount kit	Prem 64	Jun 10
4024-4AU	i3-370M	2.40		4GB	23" FHD	Multi	Intel HD	320GB	DVD±RW	11b/g/n	Hybrid	Remote	150W	Mount kit	Prem 64	Aug 10
4024-4BU	i5-460M	2.53	2.80	4GB	23" FHD	Multi	HD 5470	500GB	DVD±RW	11b/g/n	Hybrid	Remote	150W	Mount kit	Prem 64	Aug 10
4024-4CU	i7-740QM	1.73	2.93	4GB	23" FHD	Multi	HD 5650	1TB	DVD±RW	11b/g/n	Hybrid	Remote	150W	Mount kit	Prem 64	Aug 10
4024-5EU	i5-480M	2.66	2.93	4GB	23" FHD	Multi	HD 5650	1TB	DVD±RW	11b/g/n	ATSC	Remote	150W		Prem 64	Mar 11
4024-5FU	i3-380M	2.53		4GB	23" FHD	Multi	Intel HD	500GB	DVD±RW	11b/g/n	Hybrid	Remote	120W		Prem 64	Mar 11

- **All-In-One design with 23" Full HD 16:9 widescreen, multi-touch support**
- **Integrated TV tuner**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **JBL stereo speakers**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3 processor i3-350M, i3-370M, or i3-380M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or Intel Core i5 processor i5-460M or i5-480M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache or Intel Core i7 processor i7-720QM or i7-740QM with quad-core , DMI, integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology, 6MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• CyberLink YouCam• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Cyberlink Power2Go (DVD±RW)• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– AutoCollage Touch• Windows Live Essentials• Microsoft® Office 2007 Trial (60-day)• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	4GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available	
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, not removable, slot-in 320GB, 500GB, or 1TB , SATA 3.0Gb/s, 7200 rpm, 3.5" wide	
Widescreen display	23" (584.2mm) Full HD (WUXGA 1920x1080) TFT color, VibrantView (glossy), LED backlight , 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio Camera on top of screen, 0.3-megapixel, fixed focus, with microphone	
Camera Controls	Touch-sensitive buttons for LED light on/off, volume up/down, brightness up/down, Novo Vision, mode switch (PC / HDMI IN / AV IN), and display on/off	
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory; <i>Some:</i> ATI™ Mobility Radeon™ HD 5470, 512MB memory, DirectX® 11; <i>Some:</i> ATI Mobility Radeon HD 5650, 1GB memory, DirectX 11	
Chipset	Mobile Intel HM55 Express Chipset	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, SDHC)	
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), TV tuner connector, S/PDIF out, HDMI in/out <i>Side:</i> Two USB 2.0, eSATA, microphone (3.5 mm), headphone (3.5 mm), IEEE 1394 FireWire 400 (4-pin connector)	<i>Some:</i> 120-watt AC adapter <i>Some:</i> 150-watt AC adapter ENERGY® STAR 5.0-compliant RoHS-compliant
PCIe Mini Card 11b/g/n ²⁸ TV tuner	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , Mini PCIe adapter, Broadcom® chip or Atheros® chip <i>Some:</i> Hybrid tuner (ATSC / DVB-T), support analog and digital signal, PCIe Mini Card <i>Some:</i> ATSC tuner, support analog and digital signal, PCIe Mini Card	Limited Warranty ¹² ➤ 1-year parts and labor ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553) ➤ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
Bluetooth™	Bluetooth 2.1 wireless + EDR	
Modem	None	
Ethernet	Gigabit ethernet on planar, Intel 82577LC	
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / Dolby® Home Theater™ certified, JBL® stereo speakers (5 watt x 2) Power-on password, administrator password	
Security		
Keyboard	Bluetooth full-size keyboard, 6-row, 104-key, black	
Mouse	Bluetooth Optical Wheel Mouse, black	
Remote control	MCE remote control, via IR	
Dimensions ³	(WxHxD): 22.4" x 16.9" x 2.8"; 568mm x 430mm x 71mm	
Weight ²	<i>Touch models:</i> 32.6 lb (14.8kg)	
Chassis	Black color; ABS plastic	
Stand	Adjustable stand (between 12° and 35°)	
Wall mount	<i>Some:</i> Wall mount kit, meets VESA 100mm mount standard	

See footnotes for important warranty information

US models announced March 9, 2011; previous models on June 3 or August 25, 2010

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(CTLN1-1) March 2011

IdeaCentre™ A700 (4024) - Windows 7 (web only models)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Widescreen display	Multi-Touch screen	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	TV tuner	Remote control	AC adapter	Keyboard/ Mouse	Win7 preload	Avail date
4024-3BU	i3-350M	2.26		4GB	23" FHD	Multi	Intel HD	500GB ⁸	DVD±RW	11b/g/n ²⁸	Hybrid	IR remote	120W	BT/BT	Prem 64	Jun 10
4024-2BU	i5-430M	2.26	2.53	4GB	23" FHD	Multi	HD 5470	640GB	DVD±RW	11b/g/n	Hybrid	IR remote	150W	BT/BT	Prem 64	Jun 10
4024-1CU	i7-720QM	1.60	2.80	8GB	23" FHD	Multi	HD 5650	1TB	BD player	11b/g/n	Hybrid	4-in-1	150W	BT/BT	Prem 64	Jun 10
4024-4JU	i7-740QM	1.73	2.93	8GB	23" FHD	Multi	HD 5650	1TB	BD player	11b/g/n	Hybrid	4-in-1	150W	BT/BT	Prem 64	Oct 10
4024-6CU	i5-480M	2.66	2.93	8GB	23" FHD	Multi	HD 5650	1TB	DVD±RW	11b/g/n	ATSC	IR remote	150W	BT/BT	Prem 64	May 11
4024-6FU	i3-380M	2.53		4GB	23" FHD	Multi	Intel HD	1TB	DVD±RW	11b/g/n			120W	BT/BT	Prem 64	Jun 11

- **All-In-One design with 23" Full HD 16:9 widescreen, multi-touch support**
- **Integrated TV tuner**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**
- **(Selected models) 4-in-1 remote control acts as a motion game controller (requires game support), VOIP handset, Media Center remote control, and air mouse**
- **JBL® stereo speakers**

Processor	<p>Intel® Core™ i3 processor i3-350M or i3-380M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or</p> <p>Intel Core i5 processor i5-430M or i5-480M with dual-core, DMI, integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache or</p> <p>Intel Core i7 processor i7-720QM or i7-740QM with quad-core, DMI, integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology, 6MB cache</p>	<p>Preloaded operating system²⁰</p> <ul style="list-style-type: none"> - Genuine Windows® 7 Home Premium 64 <p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Lenovo® Rescue System • Driver and Application Installation • CyberLink YouCam • McAfee® VirusScan® Plus (60 days of virus definitions) • Lenovo Dynamic Brightness System • Lenovo Eye Distance System • Cyberlink Power2Go (DVD±RW, BD player) • Corel® WinDVD® (BD player) • Lenovo IdeaTouch (Touch models) <ul style="list-style-type: none"> – PowerCinema – Lenovo VeriTouch – AutoCollage Touch • Windows Live Essential • Microsoft® Office 2007 Trial (60-day)
Memory	<p>8GB max⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</p> <p><i>Italics:</i> standard memory in both sockets; no sockets available</p>	
SATA DVD±RW	<i>Some:</i> DVD burner, dual-layer support, fixed, not removable, slot-in	
SATA Blu-ray™	<i>Some:</i> Blu-ray disc reader (no Blu-ray media burning), BD-ROM, no HD-DVD playback, DVD recordable, not removable, 12.7mm high, slot-in	
SATA disk	500GB , 640GB , or 1TB , SATA 3.0Gb/s, 7200 rpm, 3.5" wide	
Widescreen display	23" (584.2mm) Full HD (WUXGA 1920x1080) TFT color , VibrantView (glossy), LED backlight , 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with microphone	
Controls	Touch-sensitive buttons for LED light on/off, volume up/down, brightness up/down, Novo Vision, mode switch (PC / HDMI IN / AV IN), and display on/off	
Graphics	<p><i>Some:</i> Intel HD Graphics in processor, uses main memory;</p> <p><i>Some:</i> ATI™ Mobility Radeon™ HD 5470, 512MB memory, DirectX® 11;</p> <p><i>Some:</i> ATI Mobility Radeon HD 5650, 1GB memory, DirectX 11</p>	
Chipset	Mobile Intel HM55 Express Chipset	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, SDHC)	
Ports	<p><i>Rear:</i> Four USB 2.0, ethernet (RJ-45), TV tuner connector, S/PDIF out, HDMI in/out</p> <p><i>Side:</i> Two USB 2.0, eSATA, microphone (3.5 mm), headphone (3.5 mm), IEEE 1394 FireWire 400 (4-pin connector)</p>	<p><i>Some:</i> 120-watt AC adapter</p> <p><i>Some:</i> 150-watt AC adapter</p> <p>ENERGY® STAR 5.0-compliant</p> <p>RoHS-compliant</p>
PCIe Mini Card	Two PCI Express Mini Card slots	
11b/g/n ²⁸	11b/g/n wireless ⁴ , Mini PCIe adapter, Broadcom® chip or Atheros chip	
TV tuner	<p><i>Some:</i> Hybrid tuner (ATSC / DVB-T), support analog and digital signal, PCIe Mini Card</p> <p><i>Some:</i> ATSC tuner, support analog and digital signal, PCIe Mini Card</p>	
Bluetooth™	Bluetooth 2.1 wireless + EDR	
Modem	None	
Ethernet	Gigabit ethernet on planar, Intel 82577LC	
Audio support	High Definition (HD) Audio, RealTek® ALC272 codec / Dolby® Home Theater™ certified, JBL stereo speakers (5 watt x 2)	
Security	Power-on password, administrator password	
Keyboard	Bluetooth full-size keyboard, 6-row, 104-key, black	
Mouse	Bluetooth Optical Wheel Mouse, black	
Remote control	<p><i>Some:</i> MCE remote control, via IR</p> <p><i>Some:</i> 4-in-1 remote control, via bluetooth, acts as motion game controller (requires game support), VOIP headset, MCE remote control, and air mouse</p>	
Dimensions ³	(WxHxD): 22.4" x 16.9" x 2.8"; 568mm x 430mm x 71mm	
Weight ²	<i>Touch models:</i> 32.6 lb (14.8kg)	
Chassis	Black color; ABS plastic	
Stand	Adjustable stand (between 12° and 35°)	
Wall mount	Wall mount kit, meets VESA 100mm mount standard	

Limited Warranty¹²

- **1-year parts and labor**
- **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- **Service upgrade options (in eligible locations):⁹**
 - **2-year Lenovo Onsite Repair**
9x5 Next Business Day (78Y1552)
 - **3-year Lenovo Onsite Repair**
9x5 Next Business Day (78Y1553)
- **24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686**

See footnotes for important warranty information

US model announced June 22, 2011,
previous models on April 07, 2009, October 22, 2010, or May 18, 2011

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Lenovo IdeaCentre B305
with optional bluetooth keyboard and mouse



Lenovo IdeaCentre B305
AV IN and TV IN on some models



Lenovo IdeaCentre B305



Lenovo IdeaCentre B305
with optional PS/2 keyboard and USB mouse



Lenovo IdeaCentre B305



Lenovo IdeaCentre B305

Type-model	Processor	GHz	Memory	Widescreen display	Multi-Touch screen	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	TV tuner	Remote control	Keyboard/Mouse	Win7 preload	Avail date
4031-1FU	Athlon II X2 235e	2.70	4GB	21.5" FHD	Multi	3000	500GB ⁸	DVD±RW	11b/g/n ²⁸			PS2/USB	Prem 64	Jun 10
4031-3BU	Athlon II X2 235e	2.70	4GB	21.5" FHD	Multi	3000	1TB	DVD±RW	11b/g/n			BT/BT	Prem 64	Aug 10
4031-1GU	Athlon II X3 400e	2.20	4GB	21.5" FHD	Multi	HD 5450	640GB	DVD±RW	11b/g/n	TV	IR remote	BT/BT	Prem 64	Jun 10
4031-1HU	Athlon II X4 600e	2.20	4GB	21.5" FHD	Multi	HD 5450	1TB	DVD±RW	11b/g/n	TV	IR remote	BT/BT	Prem 64	Jun 10
4031-3CU	Athlon II X2 235e	2.70	4GB	21.5" FHD	Multi	3000	1TB	DVD±RW	11b/g/n			BT/BT	Prem 64	Mar 11

- **All-In-One design with 21.5" Full HD 16:9 widescreen, multi-touch support**
- **(Selected models) Integrated TV tuner**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft Office 2010 Product Key Ready (O10PKR)**

Processor	AMD® Athlon™ II X2 Processor 235e with dual-core, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 tech, int DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Athlon II X3 Processor 400e with triple-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 tech, int DDR3 memory controller, and 1.5MB L2 cache (512KB per core) or AMD Athlon II X4 Processor 600e with quad-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 tech, int DDR3 memory controller, and 2MB L2 cache (512KB per core)			Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• CyberLink YouCam• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Cyberlink Power2Go (DVD±RW)• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– AutoCollage Touch• Windows Live Essential• Microsoft® Office 2010 preloaded; purchase product key to activate
Memory	4GB std / 4GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available			
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, not removable, tray-in 500GB, 640GB, or 1TB, SATA 3.0Gb/s, 7200 rpm, 3.5" wide			
Widescreen display	21.5" (546.1mm) Full HD (WUXGA 1920x1080) TFT color, VibrantView (glossy), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio Camera on top of screen, 0.3-megapixel, fixed focus, with microphone Buttons for brightness up, brightness down, display on/off, and power on/off			
Camera Controls	Buttons for brightness up, brightness down, display on/off, and power on/off			
Graphics	Some: ATI™ Radeon™ 3000, integrated graphics in 760G, uses main memory, DirectX® 10; Some: ATI Radeon HD 5450, PCI Express® x16, 512MB memory, DirectX 11, ATI Avivo™ HD			
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express 2.0 support; SB710 south bridge			
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, SDHC)			
Ports	Rear: Four USB 2.0, ethernet (RJ-45), keyboard (PS/2), TV tuner connector on some models, IEEE 1394 FireWire 400 (4-pin connector) Side: Two USB 2.0, microphone input jack (3.5 mm), headphone jack (3.5 mm)			
PCIe Mini Card	Two PCI Express Mini Card slots			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom® chip or Atheros chip			
TV tuner	Some: Hybrid tuner, support analog and digital signal, PCIe Mini Card			
Bluetooth™	Bluetooth 2.1 wireless + EDR			
Modem	None			
Ethernet	10/100 ethernet on planar, RealTek® RTL8103EL			
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (3 watt x 2)			
Security	Power-on password, administrator password			
Keyboard	Some: Bluetooth full-size keyboard, 6-row, 104-key, black Some: Full-size keyboard (PS/2 connector), Fn keys, black			
Mouse	Some: Bluetooth Optical Wheel Mouse, black Some: Optical Wheel Mouse (USB connector), black			
Remote control	Some: MCE remote control, via IR			
Dimensions ³	(WxHxD): 20.7" x 16.0" x 4.37"; 526mm x 407mm x 111mm			
Weight ²	Touch models: 24.7 lb (11.2kg)			
Chassis	Black color; ABS plastic			
Stand	Adjustable stand (between 15° and 40°)			

| **Limited Warranty**¹² ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Service upgrade options (in eligible locations):⁹ - 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552) - 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553) ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686 | | | |

See footnotes for important warranty information

US model announced March 23, 2011; previous models on June 3 or August 25, 2010

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Type-model	Processor	GHz	Memory	Widescreen display	Multi-Touch screen	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	TV tuner	Remote control	Keyboard/Mouse	Win7 preload	Avail date
4031-1RU	Athlon II X2 235e	2.70	2GB	21.5" FHD	Multi	HD 5450	320GB ⁸	DVD±RW	11b/g/n ²⁸	TV	IR remote	PS2/USB	Prem 64	Jun 10
4031-1QU	Athlon II X3 400e	2.20	4GB	21.5" FHD	Multi	HD 5450	500GB	DVD±RW	11b/g/n	TV	IR remote	PS2/USB	Prem 64	Jun 10
4031-1PU	Athlon II X4 600e	2.20	4GB	21.5" FHD	Multi	HD 5450	640GB	DVD±RW	11b/g/n	TV	IR remote	PS2/USB	Prem 64	Jun 10

- **All-In-One design with 21.5" Full HD 16:9 widescreen, multi-touch support**
- **(Selected models) Integrated TV tuner**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**

Processor	AMD® Athlon™ II X2 Processor 235e with dual-core , 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 tech, int DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Athlon II X3 Processor 400e with triple-core , 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 tech, int DDR3 memory controller, and 1.5MB L2 cache (512KB per core) or AMD Athlon II X4 Processor 600e with quad-core , 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 tech, int DDR3 memory controller, and 2MB L2 cache (512KB per core)	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• CyberLink YouCam• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Cyberlink Power2Go (DVD±RW)• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– AutoCollage Touch• Windows Live Essential• Microsoft® Office 2007 Trial (60-day)
Memory	2GB or 4GB std / 4GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, tray-in	
SATA disk	320GB , 500GB , or 640GB , SATA 3.0Gb/s, 7200 rpm, 3.5" wide	
Widescreen display	21.5" (546.1mm) Full HD (WUXGA 1920x1080) TFT color, VibrantView (glossy), LED backlight , 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with microphone	
Controls	Buttons for brightness up, brightness down, display on/off, and power on/off	
Graphics	ATI™ Radeon™ HD 5450 , PCI Express® x16, 512MB memory, DirectX® 11, ATI Avivo™ HD	
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express 2.0 support; SB710 south bridge	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, SDHC)	
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), keyboard (PS/2), TV tuner connector on some models, IEEE 1394 FireWire 400 (4-pin connector) <i>Side:</i> Two USB 2.0, microphone input jack (3.5 mm), headphone jack (3.5 mm)	
PCIe Mini Card	Two PCI Express Mini Card slots	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom® chip or Atheros chip	
TV tuner	<i>Some:</i> Hybrid tuner, support analog and digital signal, PCIe Mini Card	
Bluetooth™	None	
Modem	None	
Ethernet	10/100 ethernet on planar, RealTek® RTL8103EL	
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (3 watt x 2)	
Security	Power-on password, administrator password	
Keyboard	Full-size keyboard (PS/2 connector), Fn keys, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Remote control	<i>Some:</i> MCE remote control, via IR	
Dimensions ³	(WxHxD): 20.7" x 16.0" x 4.37"; 526mm x 407mm x 111mm	
Weight ²	<i>Touch models:</i> 24.7 lb (11.2kg)	
Chassis	Black color; ABS plastic	
Stand	Adjustable stand (between 15° and 40°)	
		Discrete models: 130-watt AC adapter ENERGY® STAR 5.0-compliant RoHS-compliant
		Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553) ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

See footnotes for important warranty information
 US models announced June 3, 2010

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Limited Warranty¹²

- ⇒ **1-year parts and labor**
- ⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ⇒ **Service upgrade options (in eligible locations):⁹**
 - **2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)**
 - **3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)**
- ⇒ **24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686**



Lenovo IdeaCentre B320
with optional Bluetooth keyboard and mouse



Lenovo IdeaCentre B320
(TV IN, and TV tuner connector
on some models)



Lenovo IdeaCentre B320



Lenovo IdeaCentre B320
with optional Bluetooth keyboard and mouse
(Hardware TV buttons on some models)



Lenovo IdeaCentre B320
(Hardware TV buttons on some models)



Lenovo IdeaCentre B320

Type-model	Proc- essor	Memory	Widescreen display	Multi- Touch screen	Camera (mega- pixel)	Graphics	SATA disk	Optical	Mini PCIe 802.11 wireless	TV tuner	Hardware TV	Remote control	Keyboard/ Mouse	USB3.0	Win7 preload
7760-1CU	G620	2Gx2	21.5" FHD	Multi	0.3M	Intel HD	500GB ⁸	DVD±RW	11b/g/n ²⁸	None	None	None	BT/BT	None	Prem 64

- **21.5" Full HD frameless display supporting state-of-the-art multi-touch***
- **Integrated TV tuner***
- **SRS Premium Sound provides the ultimate audio experience for music, movies and games on the PC**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**
- * **Optional feature**

Processor	Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.60 GHz, 3MB cache), integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Processor in FCLGA1155 socket			Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64
Implementation				
Memory	4GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3*, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller			Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW)• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– PhotoStudio Paint– Lenovo Ebook and Quick Notes• Touch Games (Touch models)<ul style="list-style-type: none">– Angry Birds– Happy Hit– Curling– Music Star– Link Up– Funny Cube– Firework• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System• Lenovo Eye Distance System
Optical	DVD burner, dual-layer support, 12.7mm, tray-in			
SATA disk	500GB, SATA 3.0Gb/s, 3.5" wide, 7200 rpm			
SATA controller	Serial ATA, SATA 3.0Gb/s support, integrated in chipset			
Widescreen display	21.5" (546.1mm) Full HD (1920x1080 WUXGA) TFT color, VibrantView (glossy), LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio			
Multi-touch	Multi-touch, 2-point support			
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with analog microphone			
Controls	Touch-sensitive buttons for menu, direction buttons (left and right), and display on/off			
Graphics	Intel HD Graphics, integrated in processor, uses main memory, DirectX® 10.1			
Chipset	Intel H61 Express Chipset			
Multicard reader	5-in-1 card reader (MMC, MS, MS PRO, SD, SDHC)			
Ports	Rear: Four USB 2.0, one USB 3.0 (on some models), ethernet (RJ-45), keyboard (PS/2), TV tuner connector (on TV models); Side: Two USB 2.0, microphone input jack (3.5 mm), headphone jack (3.5 mm), Multicard reader			
PCIe Mini Card	Two PCIe Mini Card slots (one full size and one half size)			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card adapter, Broadcom®, Realtek®, or Atheros® chip			
TV tuner	None			
Bluetooth™	Bluetooth 2.1 wireless + EDR			
Modem	None			
Ethernet	Gigabit ethernet on planar, Intel 82579V			
Audio support	High Definition (HD) Audio, Realtek ALC272 codec / SRS® Premium Sound™, stereo speakers (3 watts x 2)			
Keyboard	Bluetooth full-size keyboard, 6-row, black			
Mouse	Bluetooth Optical Wheel Mouse, black			
Remote control	None			
Power supply	200 watts, universal, auto-sensing			
Dimensions ³	Non-touch models: (WxHxD): 21.0" x 16.0" x 2.96"; 534mm x 405.2mm x 75.3mm Non-touch models w/stand: (WxHxD): 21.0" x 16.0" x 4.67"; 534mm x 405.2mm x 118.5mm Touch models: (WxHxD): 21.0" x 16.0" x 3.47"; 534mm x 405.2mm x 88.2mm Touch models w/stand: (WxHxD): 21.0" x 16.0" x 5.17"; 534mm x 405.2mm x 131.4mm			
Weight ²	From 22.11 lb (10.03 kg), vary by configuration			
Chassis	Front: black and silver color; rear: dark gray color			
Stand	Adjustable stand (between 15° and 40°), supports cable management			
VESA mount	Supports VESA 100mm mount standard			
ENERGY STAR® qualified RoHS-compliant				
Limited Warranty ¹²				
⇨ 1-year parts and labor				
⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ²³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)				
⇨ Service upgrade options (in eligible locations): ⁹				
• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)				
• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553)				
⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686				

See footnotes for important warranty information
US model announced August 10, 2011

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Lenovo IdeaCentre B500
Bluetooth keyboard and mouse on some models



Lenovo IdeaCentre B500
AV IN and TV IN on some models



Lenovo IdeaCentre B500



Lenovo IdeaCentre B500



Lenovo IdeaCentre B500



Lenovo IdeaCentre B500

Type-model	Proc- essor	GHz	Max turbo (GHz)	Memory	Widescreen display	Camera (mega- pixel)	Graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	TV tuner	Remote control	Key- board/ Mouse	Win7 preload	Avail date
7712-1SU	i3-550	3.20		2Gx2	23" FHD	0.3M	HD5450 512MB	500GB ⁸	DVD±RW	11b/g/n ²⁸			BT/BT	Prem 64	Sep 10
7712-1TU	i5-650	3.20	3.46	2Gx3	23" FHD	0.3M	HD5570 1G	1TB	DVD±RW	11b/g/n	TV	IR remote	BT/BT	Prem 64	Sep 10
7712-1UU	i7-870S	2.66	3.60	2Gx3	23" FHD	0.3M	HD5850 1G	2TB	DVD±RW	11b/g/n	TV	IR remote	BT/BT	Prem 64	Sep 10
7712-1VU	i7-870S	2.66	3.60	2Gx4	23" FHD	0.3M	HD5570 1G	2TB	DVD±RW	11b/g/n	TV	IR remote	BT/BT	Prem 64	Feb 11

- **All-In-One design with 23" Full HD 16:9 widescreen, glossy display**
- **(Seleted models) Integrated TV tuner**
- **JBL® stereo speakers**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3 processor i3-550 with dual-core , Intel 64, Hyper-Threading Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i5 processor i5-650 with dual-core , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i7 processor i7-870S with quad-core , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Rescue System• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Cyberlink Power2Go (DVD±RW)• Windows Live Essential• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate	
Implementation				
Memory	4GB, 6GB, or 8GB std / 16GB max ⁷ / DDR3 , non-parity, dual-channel capable, four 204-pin SO-DIMM sockets			
SATA optical	DVD burner, dual-layer support, 12.7mm, tray-in			
SATA disk	500GB, 1TB, or 2TB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm			
Widescreen display	23.0" (584.2mm) Full HD (1920x1080 WUXGA) TFT color, VibrantView (glossy), CCFL backlight, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio			
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with microphone			
Controls	Touch-sensitive buttons for LED light on/off, volume up/down, brightness up/down, display on/off			
Graphics	<i>Some:</i> ATI™ Radeon™ HD 5450 , PCI Express® x16, 512MB memory; <i>Some:</i> ATI Radeon HD 5570 , PCI Express x16, 1GB memory; <i>Some:</i> ATI Mobility Radeon HD 5850 , PCI Express x16, 1GB memory			
Chipset	Intel H55 Express Chipset			
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital Elite Pro Card)			
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), keyboard (PS/2), eSATA, TV IN and AV IN on some models; <i>Side:</i> Two USB 2.0, microphone input jack (3.5 mm), headphone jack (3.5 mm)			
PCIe Mini Card	Two PCIe Mini Card slots		RoHS-compliant	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card adapter, Broadcom® or Atheros chip		Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ²³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553) ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
TV tuner	<i>Some:</i> Hybrid tuner, support analog and digital signal, PCIe Mini Card adapter			
Bluetooth™	Bluetooth 2.1 wireless + EDR			
Modem	None			
Ethernet	Gigabit ethernet on planar, Intel 82578DC			
Audio support	High Definition (HD) Audio, Realtek® ALC662 codec / two JBL® stereo speakers (5 watt)			
Security	Power-on password, supervisor password			
Keyboard	Bluetooth full-size keyboard, 6-row, black			
Mouse	Bluetooth Optical Wheel Mouse, black			
Remote control	<i>Some:</i> MCE remote control (40-button), via IR			
Power supply	200 watts, universal, auto-sensing			
Dimensions ³	(WxHxD): 22.05" x 17.20" x 3.76" to 5.53"; 560mm x 437mm x 95.5 to 140.5mm			
Weight ²	22.0 lb (10 kg)			
Chassis	<i>Front:</i> black color; <i>rear:</i> silver gray color; ABS plastics			
Stand	Adjustable stand (between 15° and 35°)			

See footnotes for important warranty information

US model announced February 16, 2011; previous models on September 8, 2010

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Lenovo IdeaCentre B520
(3D Vision models)



Lenovo IdeaCentre B520
(HDMI-in, TV IN, and TV tuner
connector on some models)



Lenovo IdeaCentre B520



Lenovo IdeaCentre B520
with optional Bluetooth keyboard and mouse



Lenovo IdeaCentre B520



Lenovo IdeaCentre B520

Type-model	Proc- essor	Memory	Widescreen display	Multi- Touch screen	Camera (mega- pixel)	Graphics	SATA disk	Optical	Mini PCIe 802.11 wireless	TV tuner	Remote control	Keyboard/ Mouse	Wall mount kit	USB3.0	HDMI-in AV IN	Win7 preload
7745-2AU	i3-2100	2Gx2	23" FHD	Multi	0.3M	Intel HD	1TB ^a	DVD±RW	11b/g/n ²⁸	TV	Remote	BT/BT	Wall	USB3.0	HDMI/AV	Prem 64
7745-2EU	i7-2600	2Gx3	23" FHD	Multi	0.3M	GT555M 1G	1TB	DVD±RW	11b/g/n	TV	Remote	BT/BT	Wall	USB3.0	HDMI/AV	Prem 64
7745-2FU	i5-2310	2Gx3	23" FHD	Multi	0.3M	GT555M 1G	1TB	DVD±RW	11b/g/n	TV	Remote	BT/BT	Wall	USB3.0	HDMI/AV	Prem 64
7745-2JU	i3-2120	2Gx2	23" FHD	Multi	0.3M	Intel HD	1TB	DVD±RW	11b/g/n	TV	Remote	BT/BT	Wall	USB3.0	HDMI/AV	Prem 64
7745-2KU	i5-2320	2Gx3	23" FHD	Multi	0.3M	GT555M 1G	1TB	DVD±RW	11b/g/n	TV	Remote	BT/BT	Wall	USB3.0	HDMI/AV	Prem 64

- **23" Full HD frameless display supporting state-of-the-art multi-touch* and NVIDIA 3D Vision* technologies**
- **Integrated TV tuner**
- **3-in-1 motion drive wireless mouse* – including motion-drive gaming and remote control functions**
- **Integrated 5.0 speakers (3 watts x 5) supporting SRS Premium Sound audio enhancement**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**
- * **Optional feature**

Processor	Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.10 GHz, 3M Cache) DDR3 memory controller (up to 1333MHz) Intel Core i3-2120 Processor (2 cores / 4 threads, 3.30 GHz, 3M Cache), DDR3 memory controller (up to 1333MHz) Intel Core i5-2310 Processor (4 cores / 4 threads, 2.90 GHz, 6M Cache) Turbo Boost Technology 2.0 (up to 3.20 GHz), DDR3 memory controller (up to 1333MHz) Intel Core i5-2320 Processor (4 cores / 4 threads, 3.00 GHz, 6M Cache), Turbo Boost Technology 2.0 (up to 3.30 GHz), DDR3 memory controller (up to 1333MHz) Intel Core i7-2600 Processor (4 cores / 8 threads, 3.40 GHz, 8M Cache), Turbo Boost Technology 2.0 (up to 3.80 GHz), DDR3 memory controller (up to 1333MHz) Processor in FCLGA1155 socket	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW, Blu-ray)• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– PhotoStudio Paint– Lenovo Ebook and Quick Notes• Touch Games (Touch models)<ul style="list-style-type: none">– Angry Birds– Happy Hit– Curling– Music Star– Link Up– Funny Cube– Firework• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System*• Lenovo Eye Distance System* <p>* The software is not compatible with 720p Camera</p>
Implementation	Processor in FCLGA1155 socket	
Memory	4GB or 6GB std / 16GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, four 204-pin SO-DIMM sockets	
Optical	DVD burner, dual-layer support, 12.7mm, tray-in	
SATA disk	1TB , SATA 3.0Gb/s or SATA 6.0Gb/s, 3.5" wide, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s support, integrated in chipset	
Widescreen display	23.0" (584.2mm) Full HD (1920x1080 WUXGA) TFT color, VibrantView (glossy), LED backlight, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen	
Multi-touch	Multi-touch, 2-point support	
NVIDIA® 3D Vision	None	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with analog microphone	
Controls	Touch-sensitive buttons for LED light on/off, volume up/down, brightness up/down, display on/off, Novo Vision, mode switch (PC / HDMI IN / AV IN, depends on configuration)	
Graphics	<i>Some:</i> Intel HD Graphics 2000 , in processor, uses main memory, DirectX® 10.1; <i>Some:</i> NVIDIA® GeForce® GT 555M , PCI Express® x16, 1GB GDDR5, DirectX 11;	
Chipset	Intel H67 Express Chipset	
Multicard reader	Multicard reader (MMC, MS, MS PRO, MSXC, SD, SDHC, SDXC)	
Ports	<i>Rear:</i> Four USB 2.0 (two USB2.0 and two USB3.0 on some models), ethernet (RJ-45), keyboard (PS/2), HDMI-out, HDMI-in (on some models), AV IN (on some models), and TV tuner connector (on TV models); <i>Side:</i> Two USB 2.0, microphone input jack (3.5 mm), headphone jack (3.5 mm), Multicard reader	
PCIe Mini Card	Two PCIe Mini Card slots	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card adapter, Broadcom®, Realtek®, or Atheros® chip	
TV tuner	ATSC tuner, supports analog and digital signal, PCIe Mini Card	
Bluetooth™	Bluetooth 2.1 wireless + EDR	
Modem	None	
Ethernet	Gigabit ethernet on planar, Intel 82579V	
Audio support	High Definition (HD) Audio, Realtek ALC663 codec / SRS® Premium Sound™, 5.0 speakers (3 watts x 5)	
Keyboard	Bluetooth full-size keyboard, 6-row, black	
Mouse	Bluetooth Optical Wheel Mouse, black	
Remote control	MCE remote control, via IR	
Power supply	250 watts, universal, auto-sensing	
Dimensions ³	<i>Non-3D models: (WxHxD):</i> 22.35" x 16.80" x 3.01"; 567.8mm x 426.7mm x 76.5mm <i>3D models: (WxHxD):</i> 22.35" x 16.80" x 3.48"; 567.8mm x 426.7mm x 88.5mm	
Weight ²	From 22.22 lb (10.08 kg), vary by configuration	
Chassis	<i>Front:</i> black and silver color; <i>rear:</i> silver gray color	
Stand	Adjustable stand (between 15° and 40°), supports cable management	
Wall mount	Wall mount kit, meets VESA 100mm mount standard	

ENERGY STAR® qualified
RoHS-compliant

Limited Warranty¹²

- **1-year parts and labor**
- **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- **Service upgrade options (in eligible locations):**⁹
 - **2-year Lenovo In-Home Repair 9x5 Next Business Day** (78Y1552)
 - **3-year Lenovo In-Home Repair 9x5 Next Business Day** (78Y1553)
- **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**

See footnotes for important warranty information

US models announced November 23, 2011; previous models on July 20, 2011

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(MLC1-2) November 2011

Type-model	Proc- essor	Memory	Wide- screen display	Multi- Touch screen	3D Vision with 3D glasses	Camera (mega- pixel)	Graphics	SATA disk	Optical	Mini PCIe 802.11 wireless	TV tuner	Remote control	Key- board/ Mouse	Wall mount kit	HDMI-in AV IN	Win7 preload
7745-1FU	i7-2600	4Gx2	23" FHD	Multi	3D Vision	0.3M	GT555M 2G	2TB ⁸	BD reader	11b/g/n ²⁸	TV	Remote	BT/3in1		HDMI/AV	Prem 64
7745-1GU	i7-2600	4Gx2	23" FHD	Multi		0.3M	GT555M 2G	2TB	BD reader	11b/g/n	TV	Remote	BT/3in1		HDMI/AV	Prem 64
7745-1HU	i5-2500	4Gx2	23" FHD	Multi		0.3M	GT555M 1G	1TB	BD reader	11b/g/n	TV	Remote	BT/3in1		HDMI/AV	Prem 64
7745-1JU	i3-2120	2Gx3	23" FHD	Multi		0.3M	Intel HD	500GB	DVD±RW	11b/g/n	TV	Remote	BT/3in1		HDMI/AV	Prem 64
7745-2LU	i3-2120	2Gx3	23" FHD	Multi		0.3M	Intel HD	1TB	DVD±RW	11b/g/n	TV	Remote	BT/3in1	Wall	HDMI/AV	Prem 64
7745-2NU	i5-2320	4Gx2	23" FHD	Multi		0.3M	Intel HD	1TB	DVD±RW	11b/g/n	TV	Remote	BT/3in1	Wall	HDMI/AV	Prem 64
7745-2PU	i5-2320	4Gx2	23" FHD	Multi		0.3M	GT555M 1G	1TB	BD burner	11b/g/n	TV	Remote	BT/3in1	Wall	HDMI/AV	Prem 64
7745-2MU	i7-2600	4Gx2	23" FHD	Multi		0.3M	GT555M 2G	2TB	BD burner	11b/g/n	TV	Remote	BT/3in1	Wall	HDMI/AV	Prem 64
7745-2QU	i7-2600	4Gx2	23" FHD	Multi	3D Vision	0.3M	GT555M 2G	2TB	BD burner	11b/g/n	TV	Remote	BT/3in1	Wall	HDMI/AV	Prem 64
<ul style="list-style-type: none">• 23" Full HD frameless display supporting state-of-the-art multi-touch* and NVIDIA 3D Vision* technologies• Integrated TV tuner*• 3-in-1 motion drive wireless mouse* – including motion-drive gaming and remote control functions• Integrated 5.0 speakers (3 watts x 5) supporting SRS Premium Sound audio enhancement• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)* Optional feature																
Processor	Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.30 GHz, 3M Cache) integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2320 Processor (4 cores / 4 threads, 3.00 GHz, 6M Cache) Turbo Boost Technology 2.0 (up to 3.30 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500 Processor (4 cores / 4 threads, 3.30 GHz, 6M Cache) Turbo Boost Technology 2.0 (up to 3.70 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i7-2600 Processor (4 cores / 8 threads, 3.40 GHz, 8M Cache), Turbo Boost Technology 2.0 (up to 3.80 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Processor in FCLGA1155 socket												Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW, Blu-ray)• CyberLink PowerDVD (Blu-ray)• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– PhotoStudio Paint– Lenovo Ebook and Quick Notes• Touch Games (Touch models)<ul style="list-style-type: none">– Angry Birds– Happy Hit– Curling– Music Star– Link Up– Funny Cube– Firework• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System*• Lenovo Eye Distance System* * The software is not compatible with 720p Camera			
Implementation																
Memory	6GB or 8GB std / 16GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, four 204-pin SO-DIMM sockets															
Optical	<i>Some:</i> DVD burner, dual-layer support, 12.7mm, tray-in <i>Some:</i> Blu-ray disc reader (no Blu-ray media burning), DVD recordable, 12.7mm, tray-in <i>Some:</i> Blu-ray™ burner, Blu-ray and DVD disk recordable, 12.7mm, tray-in															
SATA disk	500GB, 1TB, or 2TB , SATA 3.0Gb/s or SATA 6.0Gb/s, 3.5" wide, 7200 rpm															
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s support, integrated in chipset															
Widescreen display	23.0" (584.2mm) Full HD (1920x1080 WUXGA) TFT color, VibrantView (glossy), <i>Non-3D models:</i> LED backlight, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, frameless screen <i>3D models:</i> CCFL backlight, 400 nits, 16:9 aspect ratio, 1000:1 contrast ratio, support 120MHz, frameless screen															
Multi-touch	Multi-touch, 2-point support															
NVIDIA® 3D Vision	<i>Some:</i> NVIDIA 3D Vision support, includes active shutter glasses and build-in IR emitter															
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with analog microphone															
Controls	Touch-sensitive buttons for LED light on/off, volume up/down, brightness up/down, display on/off, Novo Vision, mode switch (PC / HDMI IN / AV IN, depends on configuration)															
Graphics	<i>Some:</i> Intel HD Graphics , integrated in processor, uses main memory, DirectX® 10.1; <i>Some:</i> NVIDIA® GeForce® GT 555M , PCI Express® x16, 1GB GDDR5, DirectX 11; <i>Some:</i> NVIDIA GeForce GT 555M , PCI Express x16, 2GB GDDR5, DirectX 11												Ready to install applications (only some listed) <ul style="list-style-type: none">• Motion Drive Game Zone (The application is included on a CD shipped with 3-in-1 mouse)			
Chipset	Intel H67 Express Chipset															
Multicard reader	Multicard reader (MMC, MS, MS PRO, MSXC, SD, SDHC, SDXC)															
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), keyboard (PS/2), HDMI-out, HDMI-in (on some models), AV IN (on some models), and TV tuner connector (on TV models); <i>Side:</i> Two USB 2.0, microphone input jack (3.5 mm), headphone jack (3.5 mm), Multicard reader															
PCIe Mini Card	Two PCIe Mini Card slots												ENERGY STAR® qualified RoHS-compliant			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Half Mini Card adapter, Broadcom®, Realtek®, or Atheros® chip															
TV tuner	ATSC tuner, supports analog and digital signal, PCIe Mini Card															
Bluetooth™	Bluetooth 2.1 wireless + EDR															
Modem	None															
Ethernet	Gigabit ethernet on planar, Intel 82579V															
Audio support	High Definition (HD) Audio, Realtek ALC663 codec / SRS® Premium Sound™, 5.0 speakers (3 watts x 5)															
Keyboard	Bluetooth full-size keyboard, 6-row, black															
Mouse	3-in-1 motion drive Bluetooth wireless mouse, includes regular mouse function, air mouse, and motion drive game remote control															
Remote control	MCE remote control, via IR															
Power supply	250 watts, universal, auto-sensing															
Dimensions ³	<i>Non-3D models: (WxHxD):</i> 22.35" x 16.80" x 3.01"; 567.8mm x 426.7mm x 76.5mm <i>3D models: (WxHxD):</i> 22.35" x 16.80" x 3.48"; 567.8mm x 426.7mm x 88.5mm															
Weight ²	From 22.22 lb (10.08 kg), vary by configuration															
Chassis	<i>Front:</i> black and silver color; <i>rear:</i> silver gray color															
Stand	Adjustable stand (between 15° and 40°), supports cable management															
Wall mount	<i>Some:</i> Wall mount kit, meets VESA 100mm mount standard															
Limited Warranty¹² ➤ 1-year parts and labor ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553) ➤ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686																

See footnotes for important warranty information

²⁸ US models announced December 21, 2011; previous models on July 20, 2011

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(MLC1-1) December 2011

Limited Warranty¹²

➤ **1-year parts and labor**
 ➤ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
 ➤ **Service upgrade options (in eligible locations):⁹**

- **2-year Lenovo In-Home Repair 9x5 Next Business Day** (78Y1552)
- **3-year Lenovo In-Home Repair 9x5 Next Business Day** (78Y1553)

 ➤ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**



Lenovo IdeaCentre Q150



Lenovo IdeaCentre Q150
(NVIDIA ION models)



Lenovo IdeaCentre Q150
(NVIDIA ION models)



Lenovo IdeaCentre Q150



Lenovo IdeaCentre Q150
with optional Lenovo Mini Wireless Keyboard N5901
(57Y6336)



Lenovo IdeaCentre Q150
with optional mini USB keyboard and mouse

IdeaCentre™ Q150 (4081) - GMA (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	L2 cache	Memory ⁸	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	Color	Blue-tooth	Keyboard/Mouse	Win7 preload	Avail date
4081-1DU	Atom D410	1.66	512KB	1GBx1	250GB ²	None	GMA 3150	None	None	11b/g/n ²⁸	Black	None	2.4GHz	Prem 32	Feb 11
<ul style="list-style-type: none">• <i>IdeaCentre Q series provide ultimate multimedia experience for home entertainment</i>• <i>An Ultra-slim and fashionable desktop PC (only 0.5L)</i>• <i>Attaches to the back of selected VESA-compatible monitor for more space saving</i>• <i>Super power saving, saving up to 90% power compared to traditional desktop</i>• <i>Ultra quiet with low power platform</i>• <i>Lenovo® Rescue System provides OneKey recovery without booting into Windows</i>															
Processor	Intel® Atom™ processor D410 with single-core, DMI (Direct Media Interface), integrated DDR2 memory controller (up to 800MHz), integrated graphics controller, Hyper-Threading technology, and 512KB L2 cache											Tiny Desktop (0.5L) <ul style="list-style-type: none">• Black color• 6.05" W X 6.8" D X 0.85" H• 153.6mm W X 172.7mm D X 21.7mm H• 1.76 lb (0.8 kg) including stand• No bays, no slots			
Memory	1GB std, 2GB max ⁸ , PC2-6400 800MHz DDR2, non-parity, one 200-pin SO-DIMM socket														
Graphics	Intel Graphics Media Accelerator 3150 (GMA 3150), in processor, uses main memory, one analog VGA DB-15 connector											Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Home Premium 32 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)			
SATA disk	250GB, SATA 3.0Gb/s, 2.5" wide, 5400 rpm														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in NM10 chipset											65-watt AC adapter RoHS-compliant			
SATA DVD±RW	None														
Media reader	None											Limited Warranty ¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, often next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 often Next Business Day (78Y1551)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686			
Chipset	Intel NM10 Express Chipset														
Front ports	Two USB 2.0, S/PDIF-out														
Rear ports	Two USB 2.0, ethernet (RJ-45), monitor (VGA DB-15) line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)														
Audio	High Definition (HD) audio, RealTek® ALC662 codec														
External speakers	None														
Internal speaker	None														
Ethernet	10/100M ethernet on planar, Intel 82552V														
Modem	None														
Security chip	None														
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, RealTek® RTL8191SU														
TV tuner	None														
Remote control	None														
Camera	None														
Keyboard	2.4GHz Wireless Mini Keyboard N5901, palm-sized dimensions, keyboard and mouse (with track ball) combo, via micro-size USB receiver														
Mouse	None														
Stand	Detachable stand (matching color with chassis)														
Mount bracket	Mount bracket (black), meets the VESA 75mm and 100mm mount standard														

See footnotes for important warranty information
US model announced February 16, 2011

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(NR2-5) February 2011

Type-model	Processor	GHz	L2 cache	Memory ⁸	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	Color	Blue-tooth	Keyboard/Mouse	Win7 preload	Avail date
4081-4AU	Atom D510	1.66	1MB	2GBx1 DDR2	250GB ²	None	NVIDIA ION	None	None	11b/g/n ²⁸	Black	None	2.4GHz	Prem 32	Jul 10
4081-2GU	Atom D525	1.80	1MB	2GBx1 DDR3	250GB	None	NVIDIA ION	None	None	11b/g/n	Black	None	USB	Prem 64	Apr 11
4081-2HU	Atom D525	1.80	1MB	2GBx1 DDR3	250GB	None	NVIDIA ION	None	None	11b/g/n	Black	None	2.4GHz	Prem 64	Apr 11

- **IdeaCentre Q series provide ultimate multimedia experience for home entertainment**
- **An Ultra-slim and fashionable desktop PC (only 0.5L)**
- **Attaches to the back of selected VESA-compatible monitor for more space saving**
- **Super power saving, saving up to 90% power compared to traditional desktop**
- **Ultra quiet with low power platform**
- **Support 1080p full HD multimedia playback and 3D gaming**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**

Processor	Intel® Atom™ processor D510 with dual-core , integrated DDR2 memory controller (up to 800MHz), integrated graphic controller, Hyper-Threading technology, and 1MB L2 cache Intel Atom Processor D525 with dual-core , integrated DDR2/DDR3 memory controller (up to 800MHz), integrated graphic controller, Hyper-Threading Technology, and 1MB L2 cache	Tiny Desktop (0.5L) <ul style="list-style-type: none">• Black color• 6.05" W X 6.8" D X 0.85" H• 153.6mm W X 172.7mm D X 21.7mm H• 1.76 lb (0.8 kg) including stand• No bays, no slots Preloaded operating system ²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Home Premium 32- <i>Some:</i> Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• CyberLink PowerDVD (discrete models) 65-watt AC adapter RoHS-compliant Limited Warranty ¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, often next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 often Next Business Day (78Y1553)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
Memory	2GB std , 2GB max ⁸ : <i>Some:</i> PC2-6400 800MHz DDR2 , non-parity, one 200-pin SO-DIMM socket; <i>Some:</i> PC3-6400 800MHz DDR3 , non-parity, one 204-pin SO-DIMM socket	
Graphics	NVIDIA® ION™ graphics processor , DirectX® 10, 512MB memory PureVideo® HD technology, Full HD decode (1080i/p), one analog VGA DB-15 connector, one HDMI connector, HDCP-compliant	
SATA disk	250GB , SATA 3.0Gb/s, 2.5" wide, 5400 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in NM10 chipset	
SATA DVD±RW	None	
Media reader	None	
Chipset	Intel NM10 Express Chipset	
Front ports	Two USB 2.0, S/PDIF-out	
Rear ports	Two USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, HDMI), line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) audio, RealTek® ALC662 codec	
External speakers	None	
Internal speaker	None	
Ethernet	10/100M ethernet on planar, Intel 82552V	
Modem	None	
Security chip	None	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, RealTek® RTL8191SU	
TV tuner	None	
Remote control	None	
Camera	None	
Keyboard	<i>Some:</i> Mini Keyboard (USB connector), black <i>Some:</i> 2.4GHz Wireless Mini Keyboard N5901, palm-sized dimensions, keyboard and mouse (with track ball) combo, via micro-size USB receiver	
Mouse	<i>Some:</i> Mini Optical Wheel Mouse (USB connector), black	
Stand	Detachable stand (matching color with chassis)	
Mount bracket	Mount bracket (black), meets the VESA 75mm and 100mm mount standard	

See footnotes for important warranty information

²⁸ US models announced April 7, 2011; previous model on July 28, 2010

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 (NR2-2) April 2011

Type-model	Processor	GHz	L2 cache	Memory ^a	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	Color	Blue-tooth	Keyboard/Mouse	Win7 preload	Avail date
4081-6AU	Atom D510	1.66	1MB	2GBx1	500GB ²	None	NVIDIA ION	None	None	11b/g/n ²⁸	Black	None	USB/USB	Prem 32	Jul 10
4081-1EU	Atom D510	1.66	1MB	2GBx1	500GB	None	NVIDIA ION	None	None	11b/g/n	Black	None	2.4GHz	Prem 64	Feb 11
4081-2MU	Atom D525	1.80	1MB	2GBx1	500GB	None	NVIDIA ION	None	None	11b/g/n	Black	None	2.4GHz	Prem 64	Nov 11

- **IdeaCentre Q series provide ultimate multimedia experience for home entertainment**
- **An Ultra-slim and fashionable desktop PC (only 0.5L)**
- **Attaches to the back of selected VESA-compatible monitor for more space saving**
- **Super power saving, saving up to 90% power compared to traditional desktop**
- **Ultra quiet with low power platform**
- **Support 1080p full HD multimedia playback and 3D gaming**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**

Processor	Intel® Atom™ processor D510 with dual-core, integrated DDR2 memory controller (up to 800MHz), Hyper-Threading technology, and 1MB L2 cache Intel Atom Processor D525 with dual-core, integrated DDR2/DDR3 memory controller (up to 800MHz), Hyper-Threading Technology, and 1MB L2 cache	Tiny Desktop (0.5L) <ul style="list-style-type: none"> • Black color • 6.05" W X 6.8" D X 0.85" H • 153.6mm W X 172.7mm D X 21.7mm H • 1.76 lb (0.8 kg) including stand • No bays, no slots
Memory	2GB std , 2GB max ³ , PC2-6400 800MHz DDR2 , non-parity, one 200-pin SO-DIMM socket	Preloaded operating system ²⁰ <ul style="list-style-type: none"> - <i>Some:</i> Genuine Windows® 7 Home Premium 32 - <i>Some:</i> Genuine Windows 7 Home Premium 64
Graphics	NVIDIA® ION™ graphics processor , DirectX® 10, 512MB memory PureVideo® HD technology, Full HD decode (1080i/p), one analog VGA DB-15 connector, one HDMI connector, HDCP-compliant	
SATA disk	500GB , SATA 3.0Gb/s, 2.5" wide, 5400 rpm	Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none"> • Lenovo Rescue System • Driver and Application Installation • McAfee® VirusScan® Plus (60 days of virus definitions) • CyberLink PowerDVD (discrete models)
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in NM10 chipset	
SATA DVD±RW Media reader	None	65-watt AC adapter RoHS-compliant
Chipset	Intel NM10 Express Chipset	
Front ports	Two USB 2.0, S/PDIF-out	Limited Warranty¹ <ul style="list-style-type: none"> ↪ 1-year parts and labor ↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, often next business day response time) ↪ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none"> • 3-year Lenovo Onsite Repair 9x5 often Next Business Day (78Y1553) ↪ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
Rear ports	Two USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, HDMI) line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) audio, RealTek® ALC662 codec	
External speakers	None	
Internal speaker	None	
Ethernet	10/100M ethernet on planar, Intel 82552V	
Modem	None	
Security chip	None	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, RealTek® RTL8191SU	
TV tuner	None	
Remote control	None	
Camera	None	
Keyboard	<i>Some:</i> Mini Keyboard (USB connector), black <i>Some:</i> 2.4GHz Wireless Mini Keyboard N5901, palm-sized dimensions, keyboard and mouse (with track ball) combo, via micro-size USB receiver	
Mouse	<i>Some:</i> Mini Optical Wheel Mouse (USB connector), black	
Stand	Detachable stand (matching color with chassis)	
Mount bracket	Mount bracket (black), meets the VESA 75mm and 100mm mount standard	

See footnotes for important warranty information

²⁸ US model announced November 23, 2011; previous models on July 28, 2010 or February 16, 2011

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(NR2-4) November 2011



Lenovo IdeaCentre Q180



Lenovo IdeaCentre Q180
Discrete graphics models



Lenovo IdeaCentre Q180
(Discrete graphics models)



Lenovo IdeaCentre Q180
Discrete graphics models with optical drive



Optional Lenovo Mini Wireless Keyboard N5902
(57Y6678)



Lenovo IdeaCentre Q180
(Integrated graphics models)

IdeaCentre™ Q180 (3110) - Discrete (web only models)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	L2 cache	Memory ⁸	SATA disk	SATA optical	Graphics	TV tuner	Remote control	802.11 wireless	Color	Keyboard/Mouse	Win7 preload	Avail date
3110-2AU	Atom D2700	2.13	1MB	2GBx1	500GB ²		HD 6450A	None	None	11b/g/n ²⁸	Black/Silver	USB/USB	Prem 64	Nov 11
3110-2BU	Atom D2700	2.13	1MB	4GBx1	500GB	DVD±RW	HD 6450A	None	None	11b/g/n	Black/Silver	USB/USB	Prem 64	Nov 11
3110-2CU	Atom D2700	2.13	1MB	4GBx1	750GB	DVD±RW	HD 6450A	None	None	11b/g/n	Black/Silver	2.4GHz	Prem 64	Nov 11
3110-2DU	Atom D2700	2.13	1MB	4GBx1	750GB	Blu-ray	HD 6450A	None	None	11b/g/n	Black/Silver	2.4GHz	Prem 64	Nov 11

- **IdeaCentre Q series provide ultimate multimedia experience for home entertainment**
- **Tiny desktop PC, compact space-saving design, just from 22 mm wide**
- **Attaches to the back of selected VESA-compatible monitor for better space saving**
- **(Selected models) Add-on DVD reader/writer or Blu-ray Disk drive**
- **Lossless digital audio output with S/PDIF**
- **Support 1080p full HD multimedia playback and 3D gaming**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**

Processor	Intel® Atom™ D2700 processor (2 cores / 4 threads, 2.13GHz, 1MB cache), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• CyberLink PowerDVD (Blu-ray)
Memory	2GB or 4GB std, 4GB max⁸, PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket * System automatically clocks down for processors with 1066MHz DDR3 memory controller	
Graphics	AMD Radeon™ HD 6450A Graphics, DirectX® 11, 512MB memory, Full HD (1080p) playback support, External monitor support via analog VGA DB-15 connector / digital HDMI connector	
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in NM10 chipset	
External optical	<i>Some:</i> DVD burner, dual-layer support, slot-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, slot-in	
Multicard reader	8-in-1 (SD, SDHC, SDXC, MMC, MS, MS Pro, MS Pro Duo, MS XC)	
Chipset	Intel NM10 Express Chipset	65-watt AC adapter ENERGY STAR® qualified RoHS-compliant
Front ports	Two USB 3.0, line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Rear ports	Four USB 2.0 (external ODD occupies one dedicated USB 2.0 port in some models), ethernet (RJ-45), monitor (VGA DB-15, HDMI), S/PDIF-out	
Audio	High Definition (HD) audio, Realtek® ALC662 codec	
External speakers	None	
Internal speaker	None	Limited Warranty ¹ ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, often next business day response time) ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 often Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 often Next Business Day (78Y1553) ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
Ethernet	Gigabit ethernet on planar, Realtek RTL8111E-VL	
Modem	None	
Security chip	None	
11b/g/n ²⁸	11b/g/n wireless ⁴ , Realtek RTL8188CE	
TV tuner	None	
Remote control	None	
Camera	None	
Keyboard	<i>Some:</i> Mini Keyboard (USB connector), black <i>Some:</i> 2.4GHz Wireless Mini Keyboard N5902, palm-sized dimensions, keyboard and mouse (optical finger navigation) combo, via micro-size USB receiver	
Mouse	<i>Some:</i> Mini Optical Wheel Mouse (USB connector), black	
Dimensions ³	<i>w/o optical (excludes stand): (WxHxD): 6.10" x 0.87" x 7.56"; 155mm x 22mm x 192mm</i> <i>with optical (excludes stand): (WxHxD): 6.10" x 1.57" x 7.56"; 155mm x 40mm x 192mm</i>	
Weight ²	From 5.25 lb (2.38 kg) to 8.02 lb (3.64 kg), vary by configuration	
Chassis	Black and silver color	
Stand	Detachable stand (silver color)	
Mount bracket	Mount bracket, meets the VESA 75mm and 100mm mount standard	

See footnotes for important warranty information
US models announced November 23, 2011

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Lenovo IdeaCentre D400



Lenovo IdeaCentre D400



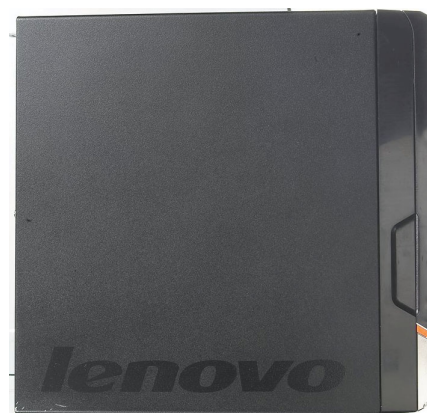
Lenovo IdeaCentre D400



Lenovo IdeaCentre D400 (rear view)



Lenovo IdeaCentre D400



Lenovo IdeaCentre D400 (left view)

Type-model	Processor	GHz	L2 cache	Memory ⁸	SATA disks	SATA optical	Graphics	eSATA	Ethernet	Color	Preload	Avail date
3013-1AU	Atom 230	1.60	512KB	1GB	1TB ² (1TB, 0, 0, 0)	None	GMA 950	eSATA	Gigabit	Black	Windows Home Server	Sep 09
3013-1BU	Atom 230	1.60	512KB	1GB	2TB (1TB, 1TB, 0, 0)	None	GMA 950	eSATA	Gigabit	Black	Windows Home Server	Sep 09
3013-1CU	Atom 230	1.60	512KB	1GB	1TB (1TB, 0, 0, 0)	None	GMA 950	eSATA	Gigabit	Black	Windows Home Server	Sep 09
3013-1DU	Atom 230	1.60	512KB	1GB	2TB (1TB, 1TB, 0, 0)	None	GMA 950	eSATA	Gigabit	Black	Windows Home Server	Sep 09

- **A Digital home storage, smaller than a 9 inch cube and built to store/share music, movies, files and more.**
- **Easy plug-and-play set up and convenient remote access.**
- **Provides four 3.5 inch bays for hard disks, up to 8TB capacity.**
- **Easy USB file transfer, pressing one button to copy USB drive contents to the internal hard drives.**

Processor	Intel® Atom™ Processor 230 with single-core, Hyper-Threading technology, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 512KB L2 cache		Small Form Factor	
Implementation	Processor in Micro-FCBGA package in BGA437 socket		<ul style="list-style-type: none">• Black color bezel• 7.9" W X 8.2" D X 8.3" H• 200mm W X 208.6mm D X 212mm H• 14.3 lb (6.5 kg) for maximum configuration	
Memory	1GB std , 2GB max ⁸ , PC2-6400 800MHz DDR2 , non-parity, one 240-pin DIMM socket <i>Non-Italics</i> : standard memory in socket; no sockets available		Bay ① 3.5", 1" high, external, standard disk Bay ② 3.5", 1" high, external, optional disk* Bay ③ 3.5", 1" high, external, optional disk* Bay ④ 3.5", 1" high, external, optional disk* * Bay used in some models	
Graphics	Intel Graphics Media Accelerator 950 (GMA 950) , integrated graphics in 945GC, uses main memory, no monitor ports, remote access via network		Slot 1: half-length, low-profile, PCI Express x4	
SATA disks	1TB or 2TB std , up to 8TB capacity, SATA 3Gb/s, 7200 rpm, Four hard disk bays, tool-less, support hot-swap*		Data protection features <ul style="list-style-type: none">• Back up all your home digital devices automatically• Duplicate important data automatically, copy designated data to two internal hard drives for added safety (some models)• Inbuilt flash drive allows easy recovery and prevents data lost in the event of a system problem	
Disk bays	* Need to first remove disk in software via Windows Home Server Console			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	None			
SATA cables	Four SATA cables (each 1-drop to device), Four SATA connectors			
eSATA port	One external SATA (eSATA) port in rear		Available at these retailers <ul style="list-style-type: none">• lenovo.com	
Diskette drive	None			
Media reader	None		Limited Warranty¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, often next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686	
Chipset	Intel 945GC Express Chipset , I/O Controller Hub 7 RAID [ICH7R] (SATA 3.0Gb/s, ethernet MAC, PCI 2.3, USB, LPC bus)			
Front ports	One USB 2.0 with USB copy button (Easy USB file transfer function)			
Rear ports	Four USB 2.0, one eSATA, ethernet (RJ-45)			
Rear audio ports	None			
Audio	None			
External speakers	None			
Internal speaker	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071			
Modem	None			
Security chip	None			
Keyboard	None			
Mouse	None			
Power supply	200 watts, universal, auto autosensing			
Security	Security slot (in rear for optional Kensington® Microsaver® cable)			
Preloaded operating system²⁰ - Genuine Windows® Home Server		Client applications (Needs customer installation, Client software CD included) <ul style="list-style-type: none">• Windows Home Server Connector Software• Lenovo Home Server EasyAccess utility		
Preloaded applications⁵ <ul style="list-style-type: none">• LightsOut• iTunes Server• LED brightness control• One Key USB backup• IP address configuration• System Information				

See footnotes for important warranty information
 US models announced September 1, 2009

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 (HS1-1) September 2009

**Partial list of accessories supported on:
IdeaCentre A, B, C, D, K, and Q series desktops****Storage and removable storage**

Lenovo Portable DVD Burner DB50 (black)	57Y6487
Lenovo Portable DVD Burner DB50 (white)	57Y6488

Keyboard

Lenovo Wired Keyboard K4803A (black)	57Y6566
Lenovo Mini Wireless Keyboard N5901A ⁵²	57Y6599 <i>ann 10/26/10</i>
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336 <i>ann 12/08/09</i>

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

Mouse

Lenovo Optical Mouse A6010 (red)	57Y6483
Lenovo Optical Mouse A6010 (black)	57Y6255
Lenovo Mini Optical Mouse S10B (white)	55Y9358
Bluetooth Laser Mice N6901A (glossy black)	57Y6482
Lenovo Wireless Mouse N30B (black)	55Y9360
Wireless Mouse N3903A (metal)	57Y6596
Wireless Mouse N3903A (coffee)	57Y6666 <i>ann 01/25/11</i>
Wireless Mouse N3902A (black)	57Y6574
Wireless Mouse N3902A (red)	57Y6673 <i>ann 01/25/11</i>

Multimedia

Lenovo Headset P550	55Y2065
Lenovo Headset P950 (black)	57Y6605 <i>ann 02/08/11</i>
Lenovo mini speaker M220	55Y2033
Lenovo speaker M0520 (black)	57Y6360 <i>ann 02/08/11</i>
Lenovo speaker M0520 (red)	57Y6361 <i>ann 02/08/11</i>

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

- ¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ² **Hard disk drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ³ **Customer Replacement Units (CRUs)** are designed to be replaced by customers during the applicable warranty period. Lenovo will send a technician onsite to perform a repair if remote telephone diagnosis does not isolate the problem, if customer replaceable parts are unable to resolve the problem, or at the request of the customer. For a list of customer replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- ⁵ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.
- ⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.

⁸ **Memory:** For PCs without a separate video card, memory supports both system and video. Accessible system memory is less than the amount stated, depending on video mode.

⁹ **Service upgrade options:** 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.

¹⁰ **Modem speeds:** Public network download 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.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.



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Lenovo V470



Lenovo V470



Lenovo V470



Lenovo V470



Lenovo V470



Lenovo V470

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam-era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Fingerprint reader	Blue-tooth	Battery	Win7 preload
4396-27U	i7-2630QM	2.00	2.90	4+2GB	14.0" HD	LED	2.0M	Intel HD	750GB ⁸	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
4396-28U	i3-2310M	2.10		2GBx2	14.0" HD	LED	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
4396-2BU	i3-2330M	2.20		4GBx1	14.0" HD	LED	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
4396-2PU	i5-2430M	2.40	3.00	4+2GB	14.0" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
4396-2FU	i7-2670QM	2.20	3.10	4+2GB	14.0" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64

- **14.0" widescreen, glossy display with LED backlight**
- **Integrated 2.0 megapixel camera**
- **Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows**
- **Fingerprint reader for easy and secure login**
- **BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage password**
- **USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00 GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20 GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live Essential• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo Security Suite• USB Port Locker• BioExcess
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high, Active Protection System™		
Widescreen display Camera	14.0" (355.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator		
Graphics	Intel HD Graphics 3000 in processor, uses system memory, external monitor support via analog VGA DB-15 connector / digital HDMI connector		Dual-core models: 65-watt AC adapter Quad-core models: 90-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® qualified RoHS-compliant
Keyboard	Full-size keyboard, 6-row, recovery key		
Touch controls	None		
Light sensor	None		
Touch pad	Two-button touch pad with scroll feature, multi-touch		
Dimensions ³	(WxDxH): 13.4" x 9.2" x 0.8" to 1.2"; 340mm x 234.6mm x 20.7mm to 31.3mm		
Weight ²	with optical drive and battery: 6-cell : 4.85 lb (2.2 kg)		
Case color	Black top, black bottom		
Case material	<i>Top and palm rest:</i> Aluminum <i>Bottom:</i> Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell Up to 5 hr		
Chipset	Mobile Intel HM65 Express Chipset		Limited Warranty ¹² ⇨ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail In repair service ⇨ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
ExpressCard/34	None		
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)		
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	Two PCIe Mini Card slots		
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface		
Modem	None		
Ethernet	Gigabit ethernet, RealTek® RTL8111E, PCIe x1		
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / one internal analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		
Security	Power-on password, hard disk password, administrator password, security lockhole		
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor		

See footnotes for important warranty information

☞ US models announced December 21, 2011; previous models on June 8, 2011

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Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam- era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Fingerprint reader	Blue- tooth	Battery	Win7 preload
4396-25U	i5-2410M	2.30	2.90	2GBx2	14.0" HD	LED	2.0M	GT 525M	500GB ⁸	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
4396-26U	i5-2410M	2.30	2.90	4+2GB	14.0" HD	LED	2.0M	GT 525M	750GB	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
<ul style="list-style-type: none">• 14.0" widescreen, glossy display with LED backlight• Integrated 2.0 megapixel camera• Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows• Fingerprint reader for easy and secure login• BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage password• USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology											Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64				
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live Essential• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo Security Suite• USB Port Locker• BioExcess				
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high, Active Protection System™											90-watt AC adapter Wireless on/off switch Graphic Optimus/Integrated switch EPEAT™ Silver rating ENERGY STAR® qualified RoHS-compliant				
Widescreen display Camera	14.0" (355.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator															
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® GT 525M , PCI Express® x16, 1GB DDR3 memory, DirectX® 11, NVIDIA CUDA™ technology, external monitor support via analog VGA DB-15 connector / digital HDMI connector															
Keyboard Touch controls Light sensor Touch pad	Full-size keyboard, 6-row, recovery key None None Two-button touch pad with scroll feature, multi-touch															
Dimensions ³ Weight ² Case color Case material	(WxDxH): 13.4" x 9.2" x 0.8" to 1.2"; 340mm x 234.6mm x 20.7mm to 31.3mm with optical drive and battery: 6-cell : 4.85 lb (2.2 kg) Black top, black bottom <i>Top and palm rest:</i> Aluminum <i>Bottom:</i> Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic											Limited Warranty¹² ⇨ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail in repair service ⇨ Service upgrade options (in eligible locations):⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686				
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell Up to 5 hr															
Chipset ExpressCard/34 Multicard reader	Mobile Intel HM65 Express Chipset None 6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)															
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)															
TV tuner PCIe Mini Card	None Two PCIe Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2															
Bluetooth™ Modem	Bluetooth 2.1 wireless + EDR, USB 2.0 interface None															
Ethernet Audio support	Gigabit ethernet, RealTek® RTL8111E, PCIe x1 High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / one internal analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)															
Security Fingerprint reader	Power-on password, hard disk password, administrator password, security lockhole Fingerprint reader on palm rest, swipe sensor															

See footnotes for important warranty information
 US models announced June 8, 2011

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Lenovo V570



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Lenovo V570

Lenovo® V570 (1066) - Integrated (web only models)

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	Memory	Widescreen display	CCFL or LED	Cam-era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Fingerprint reader	Blue-tooth	Battery	AC adapter	Win7 preload
1066-ABU	i3-2330M	4GBx1	15.6" HD	LED	2.0M	Intel HD	500GB ⁸	DVD±RW	Intel 1000	Gray	Fingerprint	BT2.1	6-cell	65W	Prem 64
1066-ACU	i5-2410M	4GBx1	15.6" HD	LED	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Gray	Fingerprint	BT2.1	6-cell	65W	Prem 64
1066-AEU	i7-2630QM	4+2GB	15.6" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Gray	Fingerprint	BT2.1	6-cell	90W	Prem 64
1066-AAU	B950	4GBx1	15.6" HD	LED	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Gray	Fingerprint	BT2.1	6-cell	65W	Prem 64
1066-ARU	i5-2430M	4+2GB	15.6" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Gray	Fingerprint	BT2.1	6-cell	65W	Prem 64
1066-ANU	i7-2670QM	4GBx2	15.6" HD	LED	2.0M	Intel HD	750GB	DVD±RW	Intel 1000	Gray	Fingerprint	BT2.1	6-cell	90W	Prem 64

- 15.6" widescreen, glossy display with LED backlight
- Integrated 2.0 megapixel camera
- **Lenovo Rescue System** provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- Fingerprint reader for easy and secure login
- BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage password
- USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Pentium® B950 processor (dual-core, 2.10GHz, 2MB cache) , DDR3 memory controller (up to 1333MHz) Intel Core™ i3-2330M processor (dual-core, 2.20GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i7-2630QM processor (quad-core, 2.00GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i7-2670QM processor (quad-core, 2.20GHz, 6MB cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • McAfee® VirusScan® Plus (60 days of virus definitions) • Windows Live Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo Security Suite • USB Port Locker • BioExcess	
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets			
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high, Active Protection System™			
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator			
Graphics	Intel HD Graphics in processor, uses system memory, external monitor support via analog VGA DB-15 connector / digital HDMI connector			
Keyboard	Full-size keyboard, 6-row, recovery key			
Numeric keypad	Numeric keypad on right of keyboard			
Touch controls	None			
Light sensor	None			
Touch pad	Two-button touch pad with scroll feature, multi-touch			
Dimensions ³	(WxDxH): 14.9" x 9.9" x 1.3"; 378mm x 252mm x 32.3mm		<i>Some:</i> 65-watt AC adapter <i>Some:</i> 90-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® qualified RoHS-compliant	
Weight ²	with optical drive and battery: <i>6-cell</i> : 5.29 lb (2.4 kg)			
Case color	Silver gray top, black bottom			
Case material	<i>Top and palm rest:</i> Aluminum <i>Bottom:</i> Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	Up to 5 hr			
Chipset	Mobile Intel HM65 Express Chipset		Limited Warranty ¹²	
ExpressCard/34	None		⇒ 1-year warranty* :	
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)		* 1-year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter	
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		⇒ Mail In repair service	
TV tuner	None		⇒ Service upgrade options (in eligible locations): ⁹	
PCIe Mini Card	Two PCIe Mini Card slots		• 1-year Lenovo Onsite Repair ¹³ 78Y1532	
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		• 1-year Onsite with accidental damage protection 78Y1533	
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface		• 2-year Lenovo Onsite Repair ¹³ 78Y1536	
Modem	None		• 3-year Lenovo Depot Repair 78Y1538	
Ethernet	Gigabit ethernet, RealTek® RTL8111E, PCIe x1		⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period ¹²	
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / one internal analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)		via 877-453-6686	
Security	Power-on password, hard disk password, administrator password, security lockhole			
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor			

See footnotes for important warranty information

US models announced December 21, 2011; previous models on August 17, 2011

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Lenovo® V570 (1066) - NVIDIA (web only models)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	Memory	Widescreen display	CCFL or LED	Cam- era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Fingerprint reader	Blue- tooth	Battery	AC adapter	Win7 preload
1066-ADU	i5-2410M	2+4GB	15.6" HD	LED	2.0M	GT 525M	750GB ⁸	DVD±RW	Intel 1000	Gray	Fingerprint	BT2.1	6-cell	90W	Prem 64
<ul style="list-style-type: none">• 15.6" widescreen, glossy display with LED backlight• Integrated 2.0 megapixel camera• Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows• Fingerprint reader for easy and secure login• BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage password• USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology										Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64				
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo Security Suite• USB Port Locker• BioExcess				
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high, Active Protection System™										90-watt AC adapter Wireless on/off switch Graphic Optimus/Integrated switch EPEAT™ Silver rating ENERGY STAR® qualified RoHS-compliant				
Widescreen display	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, LED indicator														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA GeForce® GT 525M, PCI Express® x16, 1GB DDR3 memory, DirectX® 11, NVIDIA CUDA™ technology, external monitor support via analog VGA DB-15 connector / digital HDMI connector														
Keyboard	Full-size keyboard, 6-row, recovery key										Limited Warranty¹² ⇨ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail in repair service ⇨ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538 ⇨ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686				
Numeric keypad	Numeric keypad on right of keyboard														
Touch controls	None														
Light sensor	None														
Touch pad	Two-button touch pad with scroll feature, multi-touch														
Dimensions ³	(WxDxH): 14.9" x 9.9" x 1.3"; 378mm x 252mm x 32.3mm														
Weight ²	with optical drive and battery: 6-cell: 5.29 lb (2.4 kg)														
Case color	Silver gray top, black bottom														
Case material	Top and palm rest: Aluminum Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic														
Battery - type	Lithium Ion 6-cell														
Battery - life ¹⁰	Up to 5 hr														
Chipset	Mobile Intel HM65 Express Chipset														
ExpressCard/34	None														
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)														
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner	None														
PCIe Mini Card	Two PCIe Mini Card slots														
Intel 1000	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2														
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface														
Modem	None														
Ethernet	Gigabit ethernet, RealTek® RTL8111E, PCIe x1														
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / one internal analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)														
Security	Power-on password, hard disk password, administrator password, security lockhole														
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor														

See footnotes for important warranty information
US model(s) announced August 17, 2011

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Lenovo® B470 (4315) - Integrated (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam-era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Fingerprint reader	Blue-tooth	Battery	Win7 preload
4315-24U	i3-2310M	2.10	None	2GBx2	14.0" HD	LED	0.3M	Intel HD	500GB ⁸	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
4315-25U	B800	1.50	None	4GBx1	14.0" HD	LED	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	Fingerprint		6-cell	Prem 64
4315-26U	i3-2330M	2.20	None	4GBx1	14.0" HD	LED	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	Fingerprint		6-cell	Prem 64

- 14.0" widescreen, glossy display with LED backlight
- Integrated 0.3 megapixel camera
- Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows
- Fingerprint reader for easy and secure login
- BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage passwords
- USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Widescreen flexibility; two-spindle Intel® Celeron® B800 processor (dual-core, 1.50GHz, 2MB cache) , DDR3 memory controller (up to 1333MHz) Intel Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB cache) , DDR3 memory controller (up to 1333MHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • McAfee® VirusScan® Plus (60 days of virus definitions) • Windows Live Essentials • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW) • Lenovo Security Suite • USB Port Locker • BioExcess
Memory	8GB max ⁷ ; PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in	
SATA disk	500GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high	
Widescreen display	14.0" (355.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight , 200 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator	
Graphics	Intel HD Graphics in processor, uses system memory, external monitor support via analog VGA DB-15 connector / digital HDMI connector	
Keyboard	Full-size keyboard, 6-row, recovery key	
Touch controls	None	
Light sensor	None	
Touch pad	Two-button touch pad with scroll feature, multi-touch	Integrated models: 65-watt AC adapter Wireless on/off switch EPEAT™ Silver rating ENERGY STAR® qualified RoHS-compliant
Dimensions ³	(WxDxH): 13.4" x 9.2" x 1.3"; 340mm x 234.6mm x 33.6mm	
Weight ²	with optical drive and battery: 6-cell: 4.85 lb (2.2 kg)	
Case color	Black top, black bottom	
Case material	<i>Top and palm rest:</i> Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic <i>Bottom:</i> Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	Up to 6 hr	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard/34	None	
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)	
Ports	Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	Limited Warranty ¹² ⇒ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇒ Mail In repair service ⇒ Service upgrade options (in eligible locations): ⁹ • 1-year Lenovo Onsite Repair ¹³ 78Y1532 • 1-year Onsite with accidental damage protection 78Y1533 • 2-year Lenovo Onsite Repair ¹³ 78Y1536 • 3-year Lenovo Depot Repair 78Y1538 ⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
TV tuner	None	
PCIe Mini Card	Two PCIe Mini Card slots	
Intel 1000	<i>Some:</i> 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
11b/g/n	<i>Some:</i> 11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip	
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface	
Modem	None	
Ethernet	Gigabit ethernet, RealTek® RTL8111E, PCIe x1	
Audio support	High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / one internal analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)	
Security	Power-on password, hard disk password, administrator password, security lockhole	
Fingerprint reader	Fingerprint reader on palm rest, swipe sensor	

See footnotes for important warranty information

US models announced December 21, 2011; previous models on June 22, 2011

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- Limited Warranty¹²**
- ⇒ **1-year warranty*:**
 - * **1-year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter**
 - ⇒ **Mail in repair service**
 - ⇒ **Service upgrade options (in eligible locations):⁹**
 - **1-year Lenovo Onsite Repair¹³** 78Y1532
 - **1-year Onsite with accidental damage protection** 78Y1533
 - **2-year Lenovo Onsite Repair¹³** 78Y1536
 - **3-year Lenovo Depot Repair** 78Y1538
 - ⇒ **24x¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**

Lenovo® B470 (4315) - NVIDIA (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	CCFL or LED	Cam-era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	Fingerprint reader	Blue-tooth	Battery	Win7 preload
4315-23U	i5-2410M	2.30	2.90	2GBx2	14.0" HD	LED	0.3M	GF 410M	500GB ⁸	DVD±RW	Intel 1000	Black	Fingerprint	BT2.1	6-cell	Prem 64
<ul style="list-style-type: none">• 14.0" widescreen, glossy display with LED backlight• Integrated 0.3 megapixel camera• Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows• Fingerprint reader for easy and secure login• BioExcess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage passwords• USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)																
Positioning Processor		Widescreen flexibility; two-spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology										Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64				
Memory		8GB max ⁷ ; PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications ¹⁴ (only some listed)				
SATA DVD±RW SATA disk		DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 500GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high										<ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• McAfee® VirusScan® Plus (60 days of virus definitions)• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Lenovo Security Suite• USB Port Locker• BioExcess				
Widescreen display		14.0" (355.6mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy); LED backlight, 200 nits, 16:9 aspect ratio, 500:1 contrast ratio														
Camera		Camera on top of screen, 0.3-megapixel, fixed focus, LED indicator														
Graphics		NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA GeForce® 410M, PCI Express® x16, 1GB DDR3 memory, DirectX® 11, NVIDIA CUDA™ technology, external monitor support via analog VGA DB-15 connector / digital HDMI connector														
Keyboard		Full-size keyboard, 6-row, recovery key										Discrete models: 90-watt AC adapter Wireless on/off switch Graphic Optimus/Integrated switch EPEAT™ Silver rating ENERGY STAR® qualified RoHS-compliant				
Touch controls		None														
Light sensor		None														
Touch pad		Two-button touch pad with scroll feature, multi-touch														
Dimensions ³		(WxDxH): 13.4" x 9.2" x 1.3"; 340mm x 234.6mm x 33.6mm										Limited Warranty ¹² ⇒ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇒ Mail In repair service ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 1-year Lenovo Onsite Repair¹³ 78Y1532• 1-year Onsite with accidental damage protection 78Y1533• 2-year Lenovo Onsite Repair¹³ 78Y1536• 3-year Lenovo Depot Repair 78Y1538				
Weight ²		with optical drive and battery: 6-cell: 4.85 lb (2.2 kg)														
Case color		Black top, black bottom														
Case material		Top and palm rest: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic														
Battery - type		Lithium Ion 6-cell														
Battery - life ¹⁰		Up to 5.8 hr														
Chipset		Mobile Intel HM65 Express Chipset														
ExpressCard/34		None														
Multicard reader		6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity Card, xD-Picture Card™)														
Ports		Three USB 2.0 and one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner		None														
PCIe Mini Card		Two PCIe Mini Card slots														
Intel 1000		11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2														
Bluetooth™		Bluetooth 2.1 wireless + EDR, USB 2.0 interface														
Modem		None														
Ethernet		Gigabit ethernet, RealTek® RTL8111E, PCIe x1														
Audio support		High Definition (HD) Audio, RealTek ALC272 codec / stereo speakers (1.5 watt x 2) / one internal analog microphone, microphone input jack (3.5 mm), headphone jack (stereo, 3.5 mm)														
Security		Power-on password, hard disk password, administrator password, security lockhole														
Fingerprint reader		Fingerprint reader on palm rest, swipe sensor										⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686				

See footnotes for important warranty information
US model announced June 22, 2011

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Personal Systems Reference (PSREF)

- 15.6" widescreen, glossy display with LED backlight
- Integrated 0.3 megapixel camera
- *Lenovo Rescue System provides OneKey™ recovery and OneKey Antivirus without booting into Windows*
- Fingerprint reader for easy and secure login
- BioAccess provides a convenient way to quickly encrypt or decrypt files, switch accounts, and manage passwords
- USB Port Locker prevents unauthorized access by requiring fingerprint scan to unlock
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

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(SEPR1-1) December 2011

lenovo



Lenovo G460



Lenovo G460



Lenovo G460



Lenovo G560

	Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI con- nector	Blue- tooth	Battery cells	Win7 preload	Avail date
✗	0677-2GU	i3-330M	2.13		4GB	14.0" HD	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	HDMI	Blue	6-cell	Prem 64	Jan 10
	0677-7CU	i3-370M	2.40		4GB	14.0" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	HDMI	Blue	6-cell	Pro 64	Oct 10
	0677-7DU	i5-460M	2.53	2.80	4GB	14.0" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	HDMI	Blue	6-cell	Pro 64	Oct 10
	0677-7TU	i3-370M	2.40		4GB	14.0" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	HDMI	Blue	6-cell	Prem 64	Oct 10
	0677-7UU	i5-460M	2.53	2.80	4GB	14.0" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	HDMI	Blue	6-cell	Prem 64	Oct 10
	0677-7SU	i3-370M	2.40		4GB	14.0" HD	0.3M	Intel HD	750GB	DVD±RW	11b/g/n	Black	HDMI	Blue	6-cell	Pro 64	Dec 10
	0677-2WU	i5-430M	2.26	2.53	4GB	14.0" HD	0.3M	GF 310M	320GB	DVD±RW	Intel 1000	Black	HDMI	Blue	6-cell	Prem 64	Dec 10
	0677-7EU	i5-560M	2.66	3.20	4GB	14.0" HD	0.3M	GF 310M	500GB	DVD±RW	Intel 1000	Black	HDMI	Blue	6-cell	Prem 64	Dec 10
☞	0677-9UU	i3-380M	2.53		4GB	14.0" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	HDMI	Blue	6-cell	Prem 64	Mar 11
	0677-9XU	i5-480M	2.66	2.93	4GB	14.0" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black	HDMI	Blue	6-cell	Prem 64	Mar 11

- 14.0" widescreen, glossy display
- Integrated 0.3 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face
- Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processo	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-330M, i3-370M, or i3-380M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache Intel Core i5 processor i5-430M, i5-460M, i5-480M, or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none"> • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Lenovo DirectShare • Cyberlink Power2Go (DVD±RW) 				
Memory	4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available														
Diskette drive	None														
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in														
SATA disk	320GB (5400 rpm), 500GB (5400 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high														
Widescreen display	14.0" (355.6mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 0.3-megapixel, fixed focus														
Camera															
Graphics	<i>Some:</i> Intel HD Graphics in processor, <i>Some:</i> NVIDIA® GeForce® 310M , PCI Express x16, 512MB memory, DirectX 10.1, PureVideo® HD technology, CUDA™ technology external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector														
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key														
Numeric keypad	None														
Touch controls	OneKey Theater, mute, volume up, and volume down buttons														
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®)														
Dimensions ³	(WxDxH): 13.4" x 9.13" x 0.68" to 1.35"; 340.0mm x 231.8mm x 17.2 to 34.4mm														
Weight ²	with optical drive and battery: <i>6-cell</i> : from 4.85 lb (2.2kg)														
Case color	Black top, black bottom														
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic														
Battery - type	Lithium Ion 6-cell														
Battery - life ¹⁰	<i>Discrete models:</i> up to 3.5 hr; <i>Integrated models:</i> up to 4 hr														
Chipset	Mobile Intel HM55 Express Chipset														
ExpressCard/34	One slot (ExpressCard/34)														
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)														
Ports	Two USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner	None														
PCIe Mini Card	One PCI Express Mini Card slot														
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter														
Bluetooth™	Bluetooth 2.1 wireless, USB 2.0 interface														
Modem	None														
Ethernet	10/100 ethernet, RealTek® RTL8103EL														
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)														
Security	Power-on password, hard disk password, supervisor password, security lockhole														
Fingerprint reader	None														

See footnotes for important warranty information

☞ US models announced March 2, 2011; previous models on January 26, October 20, or December 1, 2010

✗ US model withdrawn effective December 2010

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(EFL1-1) March 2011

Limited Warranty¹²

✗ **1-year warranty*:**
 * 1-year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter

✗ **Mail In repair service**

✗ **Service upgrade options⁵⁸** (in eligible locations):⁹

- 3-year Depot warranty 78Y1538
- 1-year Mail In with accidental damage protection 55Y2511
- 3-year Mail In with accidental damage protection 78Y1539
- 3-year Onsite warranty 78Y1540
- 1-year Onsite with accidental damage protection 78Y1533

✗ **Toll-free support for warranty issues during the warranty period¹²** via 877-453-6886

Lenovo® G470 (4328) - Windows 7 (web only models)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI con- nector	Blue- tooth	Battery cells	Win7 preload
4328-24U	i3-2310M	2.10		2GBx2	14.0" HD	2.0M	Intel HD	500GB ⁸	DVD±RW	11b/g/n ²⁸	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-25U	i3-2310M	2.10		2GBx2	14.0" HD	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-26U	i5-2410M	2.30	2.90	2GBx2	14.0" HD	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-27U	i5-2410M	2.30	2.90	2+4GB	14.0" HD	2.0M	HD 6370M	640GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-2UU	i5-2410M	2.30	2.90	2GBx2	14.0" HD	2.0M	Intel HD	500GB	Blu-ray	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-2VU	i5-2410M	2.30	2.90	4GBx2	14.0" HD	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-2WU	i5-2410M	2.30	2.90	4GBx2	14.0" HD	2.0M	Intel HD	750GB	Blu-ray	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-35U	i5-2410M	2.30	2.90	2+4GB	14.0" HD	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-34U	B800	1.50		4GBx1	14.0" HD	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
4328-39U	i3-2330M	2.20		4GBx1	14.0" HD	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
4328-35U	i5-2430M	2.40	3.00	4GBx1	14.0" HD	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-3DU	i5-2430M	2.40	3.00	4+2GB	14.0" HD	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4328-3BU	i5-2430M	2.40	3.00	4GBx2	14.0" HD	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64

- **14.0" widescreen, glossy display**
- **Integrated 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These system are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processo	Widescreen flexibility; two-spindle Intel® Celeron® B800 processor (dual-core, 1.50GHz, 2MB cache), DDR3 memory controller (up to 1333MHz) Intel Core™ i3-2310M processor (2 cores / 4 threads, 2.10GHz, 3MB cache), DDR3 memory controller (up to 1333MHz) Intel Core i3-2330M processor (2 cores / 4 threads, 2.20GHz, 3MB cache), DDR3 memory controller (up to 1333MHz) Intel Core i5-2410M processor (2 cores / 4 threads, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz) Intel Core i5-2430M processor (2 cores / 4 threads, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Lenovo DirectShare• Cyberlink Power2Go (DVD±RW)	
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		<i>Integrated models:</i> 65-watt AC adapter <i>Discrete models:</i> 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant	
Diskette drive	None			
SATA optical	Some: DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in Some: Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in			
SATA disk	500GB (5400 rpm), 640GB (5400 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high			
Widescreen display	14.0" (355.6mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		Limited Warranty ¹² ➤ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ➤ Mail In repair service ➤ Service upgrade options ⁵⁸ (in eligible locations): ⁹ <ul style="list-style-type: none">• 3-year Depot warranty 78Y1538• 1-year Mail In with accidental damage protection 55Y2511• 3-year Mail In with accidental damage protection 78Y1539• 3-year Onsite warranty 78Y1540• 1-year Onsite with accidental damage protection 78Y1533 ➤ Toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus			
Graphics	Some: Intel HD Graphics in processor; Some: AMD Radeon™ HD 6370M Graphics , PCI Express x16, 512MB memory, DirectX® 11; external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector (HDCP-compliant)			
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key			
Numeric keypad	None			
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch			
Dimensions ³	(WxDxH): 13.4" x 9.13" x 0.68" to 1.35"; 340.0mm x 231.8mm x 17.2 to 34.4mm			
Weight ²	with optical drive and battery: 6-cell: from 4.85 lb (2.2kg)			
Case color	Black top, black bottom			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	Discrete models: up to 5 hr; <i>Integrated models:</i> up to 6 hr			
Chipset	Mobile Intel HM65 Express Chipset			
ExpressCard/34	None			
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)			
Ports	Four USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	One PCI Express Mini Card slot			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip			
Bluetooth™	Some: Bluetooth 2.1 wireless + EDR, USB 2.0 interface			
Modem	None			
Ethernet	10/100 ethernet, Atheros AR8152L			
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)			
Security	Hard disk password, user password, administrator password, security lockhole			
Fingerprint reader	None			

See footnotes for important warranty information

US models announced December 21, 2011; previous models on February 16, June 8, or September 1, 2011

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(DKBR1-1) December 2011

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI con- nector	Express- Card	eSATA port	Win7 preload	Avail date
0679-3JU	i5-430M	2.26	2.53	4GB	15.6" HD	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	HDMI	/34	eSATA	Prem 64	Apr 10
0679-98U	P6100	2.00		4GB	15.6" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black				Prem 64	Aug 10
0679-99U	P6100	2.00		4GB	15.6" HD	0.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black				Prem 64	Aug 10
0679-AJU	P6200	2.13		2GB	15.6" HD	0.3M	Intel HD	250GB	DVD±RW	11b/g/n	Black				Prem 64	Feb 11
0679-ALU	P6200	2.13		4GB	15.6" HD	0.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black				Prem 64	Feb 11
0679-AKU	i3-380M	2.53		4GB	15.6" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black				Prem 64	Feb 11

- **15.6" widescreen, glossy display**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processo	Widescreen flexibility; two-spindle Intel® Pentium® processor P6100 or P6200 with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), and 3MB cache or Intel Core™ i3 processor i3-380M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache or Intel Core i5 processor i5-430M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none"> • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Lenovo DirectShare • Cyberlink Power2Go (DVD±RW) 					
Memory	2GB or 4GB std / 8GB max⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; 1 socket available															
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 250GB (5400 rpm), 320GB (5400 rpm), or 500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high															
Widescreen display Camera	15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 0.3-megapixel, fixed focus															
Integrated graphics	Intel HD Graphics in processor , external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector (on selected models)															
Keyboard Numeric keypad Touch controls Touch pad	Full-size keyboard, multimedia Fn keys, recovery key Numeric keypad on right of keyboard OneKey Theater, mute, volume up, and volume down buttons One-piece touch pad with two button function, supports scroll feature															
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	<i>(WxDxH):</i> 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm with optical drive and battery: <i>6-cell:</i> from 5.73 lb (2.6kg) Black top, black bottom Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Lithium Ion 6-cell <i>6-cell:</i> up to 4 hr															
Chipset ExpressCard/34 Multicard reader	Mobile Intel HM55 Express Chipset <i>Some:</i> One slot (ExpressCard/34) 5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)															
Ports	Two USB 2.0, one USB 2.0/eSATA combo port (eSATA available on selected models), ethernet (RJ-45), monitor (VGA DB-15, HDMI on selected models)															
TV tuner PCIe Mini Card 11b/g/n ²⁸ Bluetooth™ Modem Ethernet Audio support	None One PCI Express Mini Card slot 11b/g/n wireless ⁴ , PCIe Mini Card adapter None None 10/100 ethernet, RealTek® RTL8103EL High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)															
Security Fingerprint reader	Power-on password, hard disk password, supervisor password, security lockhole None															

See footnotes for important warranty information

US models announced February 16, 2011; previous models on April 7 or August 25, 2010

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(EFL2-2) February 2011

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Top color	HDMI con-necter	Blue-tooth	Battery cells	Win7 preload	Avail date
0679-23U	i3-330M	2.13	None	4GB	15.6" HD	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	HDMI	None	6-cell	Prem 64	Apr 10

- **15.6" widescreen, glossy display**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processo	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-330M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64	
Memory	4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available		Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Lenovo DirectShare • Cyberlink Power2Go (DVD±RW)	
Diskette drive	None		65-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant	
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in			
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high			
Widescreen display	15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		Limited Warranty ¹² ⇨ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail In repair service ⇨ Service upgrade options ⁵⁸ (in eligible locations): ⁹ • 3-year Depot warranty 78Y1538 • 1-year Mail In with accidental damage protection 55Y2511 • 3-year Mail In with accidental damage protection 78Y1539 • 3-year Onsite warranty 78Y1540 • 1-year Onsite with accidental damage protection 78Y1533 ⇨ Toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor , external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector			
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key			
Numeric keypad	Numeric keypad on right of keyboard			
Touch controls	OneKey Theater, mute, volume up, and volume down buttons			
Touch pad	One-piece touch pad with two button function, supports scroll feature			
Dimensions ³	(WxDxH): 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm			
Weight ²	with optical drive and battery: 6-cell : from 5.73 lb (2.6kg)			
Case color	Black top, black bottom			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	6-cell : up to 4 hr			
Chipset	Mobile Intel HM55 Express Chipset			
ExpressCard/34	One slot (ExpressCard/34)			
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)			
Ports	Two USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	One PCI Express Mini Card slot			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter			
Bluetooth™	None			
Modem	None			
Ethernet	10/100 ethernet, RealTek® RTL8103EL			
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)			
Security	Power-on password, hard disk password, supervisor password, security lockhole			
Fingerprint reader	None			

See footnotes for important warranty information
 US model announced May 12, 2010

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 (EFL2-3) May 2010

Type-model	Pro- cessor	GHz	Memory	Widescreen display	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue- tooth	Battery cells	Win7 preload	Avail date
0679-2AU	i3-330M	2.13	4GB	15.6" HD	0.3M	Intel HD	320GB ⁸	DVD±RW	11b/g/n ²⁸	Black	HDMI	None	6-cell	Prem 64	Jan 10

- **15.6" widescreen, glossy display**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processo	Widescreen flexibility; two-spindle Intel® Core™ i3 processor i3-330M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology, and 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64	
Memory	4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available		Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Lenovo DirectShare • Cyberlink Power2Go (DVD±RW)	
Diskette drive	None		65-watt AC adapter Wireless on/off switch ENERGY STAR® 5.0-compliant RoHS-compliant	
SATA DVD±RW	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in			
SATA disk	320GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high			
Widescreen display	15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		Limited Warranty ¹² ⇨ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail In repair service ⇨ Service upgrade options ⁵⁸ (in eligible locations): ⁹ • 3-year Depot warranty 78Y1538 • 1-year Mail In with accidental damage protection 55Y2511 • 3-year Mail In with accidental damage protection 78Y1539 • 3-year Onsite warranty 78Y1540 • 1-year Onsite with accidental damage protection 78Y1533 ⇨ Toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor , external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector			
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key			
Numeric keypad	Numeric keypad on right of keyboard			
Touch controls	OneKey Theater, mute, volume up, and volume down buttons			
Touch pad	One-piece touch pad with two button function, supports scroll feature			
Dimensions ³	(WxDxH): 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm			
Weight ²	with optical drive and battery: <i>6-cell</i> : from 5.73 lb (2.6kg)			
Case color	Black top, black bottom			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	<i>6-cell</i> : up to 4 hr			
Chipset	Mobile Intel HM55 Express Chipset			
ExpressCard/34	One slot (ExpressCard/34)			
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)			
Ports	Two USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	One PCI Express Mini Card slot			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter			
Bluetooth™	None			
Modem	None			
Ethernet	10/100 ethernet, RealTek® RTL8103EL			
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (2 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)			
Security	Power-on password, hard disk password, supervisor password, security lockhole			
Fingerprint reader	None			

See footnotes for important warranty information
 US model announced January 26, 2010

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 (EFL2-1) January 2010

Lenovo® G560e (1050) - Integrated (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Memory	CCFL Widescreen or display LED	Cam- era	Integrated graphics	Chipset	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Top color	Card reader	Blue- tooth	Win7 preload	Avail date
1050-42U	T3500	2.10	2GBx1	15.6" HD LED	0.3M	4500MHD	GM45	250GB ⁸	DVD±RW	11b/g/n ²⁸	Dark Blue	5-in-1	None	Prem 64	Apr 11

- **15.6" widescreen, glossy display**
- **Integrated 0.3 megapixel camera and Lenovo's VeriFace face recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Celeron® Processor T3500 with dual-core, 800MHz system bus, and 1MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live™ Essentials• CyberLink YouCam• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)• Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Diskette drive SATA DVD±RW SATA disk	None DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in 250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, removable		
Widescreen display Camera	15.6" (396.2mm) HD (WXGA 1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio Camera on top of screen, 0.3-megapixel, fixed focus		
Integrated graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GM45, external analog monitor support via VGA DB-15 connector; <i>Max external resolution: 2048x1536@85Hz (VGA)</i>		
Keyboard Numeric keypad Touch pad	Full-size keyboard, Fn keys, recovery key Numeric keypad on right of keyboard Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		65-watt AC adapter Wireless on/off switch RoHS-compliant Limited Warranty ¹² ⇒ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇒ Mail In repair service ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 3-year Depot warranty 78Y1538• 3-year Mail In with accidental damage protection 78Y1539• 3-year Onsite warranty 78Y1540• 1-year Onsite with accidental damage protection 78Y1533 ⇒ Toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	(WxDxH): 14.8" x 9.8" x 0.7" to 1.4"; 376mm x 249.8mm x 17.3 to 34.9mm with optical drive and battery: <i>6-cell</i> : from 5.73 lb (2.6 kg) Dark blue top, black bottom Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Lithium Ion 6-cell <i>6-cell</i> : up to 4 hr		
Chipset	Mobile Intel GM45 Express Chipset (Memory Controller Hub), ICH9M I/O Controller Hub		
ExpressCard/34 Multicard reader	None 5-in-1 reader (MultiMedia Card, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Three USB 2.0, external monitor (VGA), ethernet (RJ-45)		
TV tuner	None		
Mini PCI Express	One Mini PCI Express slot		
11b/g/n Bluetooth™	11b/g/n wireless ⁴ , PCIe Half Mini Card, Broadcom® or Atheros® chip		
Modem	None		
Ethernet	10/100 ethernet, Atheros AR8152L		
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security Fingerprint reader	Power-on password, user password, supervisor password, security lockhole None		

See footnotes for important warranty information
US model announced April 7, 2011

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(WSHT1-1) April 2011

Lenovo® G570 (4334) - Windows 7

Personal Systems Reference (PSREF)

	Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue- tooth	Battery cells	Win7 preload
Intel Core i3 Core i5 Core i7	4334-46U	i3-2310M	2.10		4GBx1	15.6" HD	0.3M	Intel HD	500GB ⁸	DVD±RW	11b/g/n ²⁸	Dark brown	HDMI		6-cell	Prem 64
	4334-5NU	i3-2310M	2.10		2GBx2	15.6" HD	0.3M	Intel HD	320GB	DVD±RW	11b/g/n	Dark brown			6-cell	Prem 64
	4334-5TU	i3-2310M	2.10		2GBx2	15.6" HD	0.3M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
	4334-62U	B940	2.00		2+1GB	15.6" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black			6-cell	Prem 64
	4334-4JU	B940	2.00		2GBx1	15.6" HD	0.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black			6-cell	Prem 64
	4334-4QU	B940	2.00		2GBx2	15.6" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black			6-cell	Prem 64
	4334-7RU	B950	2.10		2GBx1	15.6" HD	0.3M	Intel HD	320GB	DVD±RW	11b/g/n	Black			6-cell	Prem 64
	4334-7UU	B950	2.10		4GBx1	15.6" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black			6-cell	Prem 64
	4334-7PU	i3-2330M	2.20		4GBx1	15.6" HD	0.3M	Intel HD	500GB	DVD±RW	11b/g/n	Black			6-cell	Prem 64
	4334-7QU	i3-2330M	2.20		4+2GB	15.6" HD	0.3M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
Intel Core i5	4334-8PU	i5-2430M	2.40	3.00	4GBx1	15.6" HD	0.3M	Intel HD	750GB	DVD±RW	11b/g/n	Black			6-cell	Prem 64

- 15.6" widescreen, glossy display
- Integrated 0.3 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face
- Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>Widescreen flexibility; two-spindle</i></p> <p>Intel® Pentium® B940 processor (2 cores / 2 threads, 2.00GHz, 2MB cache), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)</p> <p>Intel Pentium B950 processor (2 cores / 2 threads, 2.10GHz, 2MB cache), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)</p> <p>Intel Core™ i3-2310M processor (2 cores / 4 threads, 2.10GHz, 3MB cache), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)</p> <p>Intel Core i3-2330M processor (2 cores / 4 threads, 2.20GHz, 3MB cache), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz)</p> <p>Intel Core i5-2430M processor (2 cores / 4 threads, 2.40GHz, 3MB cache), integrated Intel HD Graphics, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz)</p>	<p>Preloaded operating system²⁰</p> <ul style="list-style-type: none"> Genuine Windows® 7 Home Premium 64 <p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> Lenovo OneKey Recovery Lenovo ReadyComm McAfee® VirusScan® Plus (60 days of virus definitions) Adobe® Reader® CyberLink YouCam Microsoft® Office 2010 preloaded; purchase product key to activate VeriFace™ Lenovo Energy Management Software Lenovo DirectShare Cyberlink Power2Go (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Diskette drive SATA DVD±RW SATA disk	<p>None</p> <p>DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in</p> <p>320GB (5400 rpm), 500GB (5400 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high</p>	
Widescreen display Camera	<p>15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio</p> <p>Camera on top of screen, 0.3-megapixel, fixed focus</p>	
Integrated graphics	<p>Intel HD Graphics in processor,</p> <p>external analog monitor support via VGA DB-15 connector,</p> <p><i>Some:</i> digital monitor support via HDMI connector</p>	
Keyboard Numeric keypad Touch pad	<p>Full-size keyboard, multimedia Fn keys, recovery key</p> <p>Numeric keypad on right of keyboard</p> <p>Two-button touch pad with scroll feature (no TrackPoint®), multi-touch</p>	65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	<p>(<i>WxDxH</i>): 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm</p> <p>with optical drive and battery: <i>6-cell</i>: from 5.73 lb (2.6kg)</p> <p>Black or dark brown top, black bottom</p> <p>Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic</p> <p>Lithium Ion 6-cell</p> <p><i>Integrated models:</i> up to 6 hr</p>	
Chipset ExpressCard/34 Multicard reader	<p>Mobile Intel HM65 Express Chipset</p> <p>None</p> <p>5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)</p>	
Ports	Four USB 2.0, external monitor (VGA DB-15, HDMI on some models), ethernet (RJ-45)	
TV tuner PCIe Mini Card 11b/g/n ²⁸ Bluetooth™ Modem Ethernet Audio support	<p>None</p> <p>One PCI Express Mini Card slot</p> <p>11b/g/n wireless⁴, PCIe Mini Card adapter, Broadcom® or Atheros® chip</p> <p><i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface</p> <p>None</p> <p>10/100 ethernet, Atheros AR8152L</p> <p>High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)</p> <p>Hard disk password, user password, administrator password, security lockhole</p> <p>None</p>	<p>Limited Warranty¹²</p> <p>⇒ 1-year warranty*:</p> <ul style="list-style-type: none"> * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter <p>⇒ Mail In repair service</p> <p>⇒ Service upgrade options⁵⁸ (in eligible locations):⁹</p> <ul style="list-style-type: none"> • 3-year Depot warranty 78Y1538 • 1-year Mail In with accidental damage protection 55Y2511 • 3-year Mail In with accidental damage protection 78Y1539 • 3-year Onsite warranty 78Y1540 • 1-year Onsite with accidental damage protection 78Y1533 <p>⇒ Toll-free support for warranty issues during the warranty period¹² via 877-453-6686</p>
Security Fingerprint reader	None	

See footnotes for important warranty information

 US models announced October 13, 2011; previous model on March 23 and July 6, 2011

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Lenovo® G570 (4334) - Windows 7 (web only models)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Integrated graphics	SATA disk GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue- tooth	Battery cells	Win7 preload
4334-2HU	i3-2310M	2.10		2GBx2	15.6" HD	2.0M	Intel HD	500GB 5400	DVD±RW	11b/g/n ²⁸	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-2JU	i3-2310M	2.10		2GBx2	15.6" HD	2.0M	Intel HD	500GB 5400	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-2KU	i5-2410M	2.30	2.90	2GBx2	15.6" HD	2.0M	Intel HD	500GB 5400	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-4AU	i5-2410M	2.30	2.90	2GBx2	15.6" HD	2.0M	Intel HD	500GB 5400	Blu-ray	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-5JU	i5-2410M	2.30	2.90	4GBx2	15.6" HD	2.0M	Intel HD	750GB 5400	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-5HU	i5-2410M	2.30	2.90	4GBx2	15.6" HD	2.0M	Intel HD	750GB 5400	Blu-ray	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-5ZU	B940	2.00		2GBx1	15.6" HD	2.0M	Intel HD	500GB 5400	DVD±RW	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
4334-5YU	B940	2.00		4GBx1	15.6" HD	2.0M	Intel HD	500GB 5400	DVD±RW	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
4334-7XU	B800	1.50		4GBx1	15.6" HD	2.0M	Intel HD	500GB 5400	DVD±RW	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
4334-A2U	i5-2430M	2.40	3.00	4GBx1	15.6" HD	2.0M	Intel HD	500GB 5400	Blu-ray	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-A8U	i5-2430M	2.40	3.00	4+2GB	15.6" HD	2.0M	Intel HD	750GB 5400	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-B7U	i5-2430M	2.40	3.00	4GBx2	15.6" HD	2.0M	Intel HD	500GB 7200	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64
4334-B8U	i5-2430M	2.40	3.00	4+2GB	15.6" HD	2.0M	Intel HD	500GB 7200	DVD±RW	11b/g/n	Dark brown	HDMI	Blue	6-cell	Prem 64

- **15.6" widescreen, glossy display**
- **Integrated 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Celeron® B800 processor (2 cores / 2 threads, 1.50GHz, 2MB cache), DDR3 memory controller (up to 1333MHz) Intel Pentium® B940 processor (2 cores / 2 threads, 2.00GHz, 2MB cache), DDR3 memory controller (up to 1333MHz) Intel Core™ i3-2310M processor (2 cores / 4 threads, 2.10GHz, 3MB cache), DDR3 memory controller (up to 1333MHz) Intel Core i5-2410M processor (2 cores / 4 threads, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz) Intel Core i5-2430M processor (2 cores / 4 threads, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Lenovo DirectShare • Cyberlink Power2Go (DVD±RW)	
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;			
Diskette drive	None			
SATA optical	None <i>Some:</i> DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in			
SATA disk	500GB (5400 rpm), 500GB (7200 rpm), or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high			
Widescreen display	15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 2.0-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor , uses system memory, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector			
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key		65-watt AC adapter	
Numeric keypad	Numeric keypad on right of keyboard		Wireless on/off switch	
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		EPEAT™ Gold rating	
Dimensions ³	(WxDxH): 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm		ENERGY STAR® 5.0-compliant	
Weight ²	with optical drive and battery: 6-cell : from 5.73 lb (2.6kg)		RoHS-compliant	
Case color	Dark brown top, black bottom			
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic			
Battery - type	Lithium Ion 6-cell			
Battery - life ¹⁰	<i>Discrete models:</i> up to 5 hr; <i>Integrated models:</i> up to 6 hr			
Chipset	Mobile Intel HM65 Express Chipset			
ExpressCard/34	None			
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)			
Ports	Four USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
TV tuner	None			
PCIe Mini Card	One PCI Express Mini Card slot			
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip			
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface			
Modem	None			
Ethernet	10/100 ethernet, Atheros AR8152L			
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)			
Security	Hard disk password, user password, administrator password, security lockhole			
Fingerprint reader	None			

Limited Warranty ¹²	
⇒ 1-year warranty*:	
* 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter	
⇒ Mail In repair service	
⇒ Service upgrade options ⁵⁸ (in eligible locations): ⁹	
• 3-year Depot warranty	78Y1538
• 1-year Mail In with accidental damage protection	55Y2511
• 3-year Mail In with accidental damage protection	78Y1539
• 3-year Onsite warranty	78Y1540
• 1-year Onsite with accidental damage protection	78Y1533
⇒ Toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	

See footnotes for important warranty information

Ⓔ US models announced December 21, 2011; previous models on February 16, June 8, August 10, or October 13, 2011

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Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue-tooth	Battery cells	Win7 preload
4383-48U	AMD E-350	1.60	4GBx1	15.6" HD LED	0.3M	HD 6310M	500GB ⁸	DVD±RW	11b/g/n ²⁸	Black	None	None	6-cell	Prem 64
4383-3CU	AMD E-350	1.60	1+2GB	15.6" HD LED	0.3M	HD 6310M	320GB	DVD±RW	11b/g/n	Black	None	None	6-cell	Prem 64
4383-3YU	AMD E-450	1.65	4GBx1	15.6" HD LED	0.3M	HD 6320M	500GB	DVD±RW	11b/g/n	Black	None	None	6-cell	Prem 64
4383-4HU	AMD E-450	1.65	4GBx1	15.6" HD LED	0.3M	HD 6320M	320GB	DVD±RW	11b/g/n	Black	None	None	6-cell	Prem 64

- **15.6" widescreen, glossy display**
- **Integrated 0.3 or 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Widescreen flexibility; two-spindle</i> AMD Accelerated Processor E-350 (dual-core, 1.60GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310M Graphics, integrated DDR3 memory controller (up to 1066MHz) AMD Accelerated Processor E-450 (dual-core, 1.65GHz, 1MB L2 cache), integrated AMD Radeon HD 6320M Graphics, integrated DDR3 memory controller (up to 1333MHz)	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW)
Memory	8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, two 204-pin SO-DIMM sockets	
Diskette drive	None	
SATA optical	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in	
SATA disk	320GB (5400 rpm) or 500GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high	
Widescreen display	15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus	
Integrated graphics	<i>Some: AMD Radeon HD 6310M Graphics</i> , in processor, DirectX® 11, use system memory, <i>Some: AMD Radeon HD 6320M Graphics</i> , in processor, DirectX 11, use system memory, External monitor support via analog VGA DB-15 connector	
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key	
Numeric keypad	Numeric keypad on right of keyboard	
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch	40-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Dimensions ³	(WxDxH): 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm	
Weight ²	with optical drive and battery: <i>6-cell</i> : from 5.73 lb (2.6kg)	
Case color	Black top, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>Integrated models</i> : up to 6 hr	
Chipset	AMD A50M FCH	
ExpressCard/34	None	
Multicard reader	2-in-1 reader (MMC, Secure Digital Card)	
Ports	Four USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)	
TV tuner	None	
PCIe Mini Card	One PCI Express Mini Card slot	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip	
Bluetooth™	None	
Modem	None	
Ethernet	10/100 ethernet, Atheros AR8152L	
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)	
Security	Hard disk password, user password, administrator password, security lockhole	
Fingerprint reader	None	Limited Warranty¹² ⇨ 1-year warranty* : * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail In repair service ⇨ Service upgrade options⁵⁸ (in eligible locations): ⁹ • 3-year Depot warranty 78Y1538 • 1-year Mail In with accidental damage protection 55Y2511 • 3-year Mail In with accidental damage protection 78Y1539 • 3-year Onsite warranty 78Y1540 • 1-year Onsite with accidental damage protection 78Y1533 ⇨ Toll-free support for warranty issues during the warranty period¹² via 877-453-6686

See footnotes for important warranty information

US models announced October 13, 2011; previous models on August 10, 2011

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Lenovo® G575 (4383) - Integrated (web only models)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue-tooth	Battery cells	Win7 preload
4383-3NU	AMD E-350	1.60	4GBx1	15.6" HD LED	2.0M	HD 6310M	750GB ⁸	DVD±RW	11b/g/n ²⁸	Black	None	None	6-cell	Prem 64
4383-3PU	AMD E-350	1.60	4GBx1	15.6" HD LED	2.0M	HD 6310M	500GB	DVD±RW	11b/g/n	Black	None	None	6-cell	Prem 64

- **15.6" widescreen, glossy display**
- **Integrated 0.3 or 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle AMD Accelerated Processor E-350 (dual-core, 1.60GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310M Graphics, integrated DDR3 memory controller (up to 1066MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64
Memory	8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, two 204-pin SO-DIMM sockets		
Diskette drive	None		Preloaded applications ¹⁴ (only some listed) • Lenovo OneKey Recovery • Lenovo ReadyComm • ooVoo™ • McAfee® VirusScan® Plus (60 days of virus definitions) • Adobe® Reader® • CyberLink YouCam • Microsoft Office 2010 preloaded; purchase product key to activate • VeriFace™ • Lenovo Energy Management Software • Cyberlink Power2Go (DVD±RW)
SATA optical	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in		
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high		
Widescreen display	15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus		
Integrated graphics	AMD Radeon HD 6310M Graphics , in processor, DirectX® 11, use system memory, External monitor support via analog VGA DB-15 connector		
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key		
Numeric keypad	Numeric keypad on right of keyboard		
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch		
Dimensions ³	(WxDxH): 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : from 5.73 lb (2.6kg)		
Case color	Black top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	<i>Integrated models</i> : up to 6 hr		
Chipset	AMD A50M FCH		
ExpressCard/34	None		
Multicard reader	2-in-1 reader (MMC, Secure Digital Card)		
Ports	Four USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCI Express Mini Card slot		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip		
Bluetooth™	None		
Modem	None		
Ethernet	10/100 ethernet, Atheros AR8152L		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	Hard disk password, user password, administrator password, security lockhole		
Fingerprint reader	None		
			40-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
			Limited Warranty¹² ⇒ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇒ Mail In repair service ⇒ Service upgrade options⁵⁸ (in eligible locations): ⁹ • 3-year Depot warranty 78Y1538 • 1-year Mail In with accidental damage protection 55Y2511 • 3-year Mail In with accidental damage protection 78Y1539 • 3-year Onsite warranty 78Y1540 • 1-year Onsite with accidental damage protection 78Y1533 ⇒ Toll-free support for warranty issues during the warranty period¹² via 877-453-6686

See footnotes for important warranty information
US models announced August 10, 2011

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Lenovo® G575 (4383) - Switchable (web only models)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Widescreen display	Cam-era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue-tooth	Battery cells	Win7 preload
4383-4PU	AMD E-450	1.65	4+2GB	15.6" HD LED	0.3M	HD 6370M	750GB ⁸	DVD±RW	11b/g/n ²⁸	Black	None	BT2.1	6-cell	Prem 64
<ul style="list-style-type: none">• 15.6" widescreen, glossy display• Integrated 0.3 or 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face• Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														

Positioning Processor	<i>Widescreen flexibility; two-spindle</i> AMD Accelerated Processor E-450 (dual-core, 1.65GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6320M Graphics, integrated DDR3 memory controller (up to 1333MHz)	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Cyberlink Power2Go (DVD±RW)
Memory	8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, two 204-pin SO-DIMM sockets	
Diskette drive	None	
SATA optical	DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in	
SATA disk	750GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high	
Widescreen display	15.6" (396.2mm) HD (1366x768) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus	
Switchable graphics	Dynamic switching between discrete and integrated graphics (user selectable), AMD Radeon HD 6320M Graphics in processor, and AMD Radeon HD 6370M Graphics , PCI Express® x16, 1GB memory, DirectX® 11, external analog monitor support via VGA DB-15 connector	
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key	
Numeric keypad	Numeric keypad on right of keyboard	
Touch pad	Two-button touch pad with scroll feature (no TrackPoint®), multi-touch	65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant
Dimensions ³	(WxDxH): 14.83" x 9.83" x 0.68" to 1.37"; 376.8mm x 249.8mm x 17.3 to 34.9mm	Limited Warranty¹² ⇨ 1-year warranty*: * 1-year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ⇨ Mail In repair service ⇨ Service upgrade options⁵⁸ (in eligible locations): ⁹ <ul style="list-style-type: none">• 3-year Depot warranty 78Y1538• 1-year Mail In with accidental damage protection 55Y2511• 3-year Mail In with accidental damage protection 78Y1539• 3-year Onsite warranty 78Y1540• 1-year Onsite with accidental damage protection 78Y1533 ⇨ Toll-free support for warranty issues during the warranty period¹² via 877-453-6686
Weight ²	with optical drive and battery: 6-cell : from 5.73 lb (2.6kg)	
Case color	Black top, black bottom	
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type	Lithium Ion 6-cell	
Battery - life ¹⁰	<i>Integrated models</i> : up to 6 hr	
Chipset	AMD A50M FCH	
ExpressCard/34	None	
Multicard reader	2-in-1 reader (MMC, Secure Digital Card)	
Ports	Four USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)	
TV tuner	None	
PCIe Mini Card	One PCI Express Mini Card slot	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip	
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface	
Modem	None	
Ethernet	10/100 ethernet, Atheros AR8152L	
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)	
Security	Hard disk password, user password, administrator password, security lockhole	
Fingerprint reader	None	

See footnotes for important warranty information
US model(s) announced October 13, 2011

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Lenovo G770



Lenovo G770



Lenovo G770



Lenovo G770



Lenovo G770



Lenovo G770

Lenovo® G770 (1037) - Integrated (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Integrated graphics	SATA disk	Optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue- tooth	Battery cells	Win7 preload
1037-2MU	i3-2310M	2.10		2GBx2	17.3" HD+	2.0M	Intel HD	750GB ⁸	Blu-ray	11b/g/n ²⁸	Dark brown	HDMI		6-cell	Prem 64
1037-28U	i3-2310M	2.10		2GBx2	17.3" HD+	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
1037-2LU	i5-2410M	2.30	2.90	2GBx2	17.3" HD+	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-2WU	i3-2330M	2.20		4GBx1	17.3" HD+	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
1037-2UU	i3-2330M	2.20		4GBx1	17.3" HD+	2.0M	Intel HD	750GB	Blu-ray	11b/g/n	Dark brown	HDMI		6-cell	Prem 64
1037-2VU	i5-2430M	2.40	3.00	4+2GB	17.3" HD+	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-2XU	i5-2430M	2.40	3.00	4GBx2	17.3" HD+	2.0M	Intel HD	750GB	Blu-ray	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64

- **17.3" widescreen, glossy display**
- **Integrated 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB cache) , integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz) Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB cache) , integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz) Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache) , integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Lenovo DirectShare• Cyberlink Power2Go (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Diskette drive	None		
Optical	<i>Some:</i> DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in		
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high		
Widescreen display	17.3" (439.4mm) HD+ (1600x900) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector (HDCP-compliant)		
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key		
Numeric keypad	Numeric keypad on right of keyboard		
Touch pad	Two-button touch pad with scroll feature, multi-touch		
Dimensions ³	(WxDxH): 16.38" x 10.71" x 1.42" to 1.77"; 416mm x 272mm x 36.1 to 44.9mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : from 6.61 lb (3.0kg)		
Case color	Dark brown top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	<i>Integrated models</i> : up to 5 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Four USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCI Express Mini Card slot		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip		
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless + EDR, USB 2.0 interface		
Modem	None		
Ethernet	10/100 ethernet, Atheros AR8152L		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	Hard disk password, user password, administrator password, security lockhole		
Fingerprint reader	None		

| 65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® qualified RoHS-compliant | | |
| **Limited Warranty**¹² ➤ **1-year warranty***: * **1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter** ➤ **Mail In repair service** ➤ **Service upgrade options**⁵⁸ (in eligible locations):⁹ - **3-year Depot warranty** 78Y1538 - **1-year Mail In with accidental damage protection** 55Y2511 - **3-year Mail In with accidental damage protection** 78Y1539 - **3-year Onsite warranty** 78Y1540 - **1-year Onsite with accidental damage protection** 78Y1533 ➤ **Toll-free support for warranty issues during the warranty period**¹² via 877-453-6686 | | |

See footnotes for important warranty information

US models announced October 13, 2011; previous models on July 6, 2011

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Lenovo® G770 (1037) - Integrated (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro-cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam-era	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue-tooth	Battery cells	Win7 preload
1037-2GU	i5-2410M	2.30	2.90	4GBx2	17.3" HD+	2.0M	Intel HD	750GB ⁸	DVD±RW	11b/g/n ²⁸	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-2HU	i5-2410M	2.30	2.90	2GBx2	17.3" HD+	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-52U	i5-2410M	2.30	2.90	4+2GB	17.3" HD+	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-53U	i5-2410M	2.30	2.90	4+2GB	17.3" HD+	2.0M	Intel HD	750GB	Blu-ray	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-2YU	i3-2330M	2.20		4GBx1	17.3" HD+	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-5NU	i5-2430M	2.40	3.00	4GBx1	17.3" HD+	2.0M	Intel HD	500GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-5MU	i5-2430M	2.40	3.00	4+2GB	17.3" HD+	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-5KU	i5-2430M	2.40	3.00	4GBx2	17.3" HD+	2.0M	Intel HD	750GB	DVD±RW	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64

- **17.3" widescreen, glossy display**
- **Integrated 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face**
- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i3-2330M processor (dual-core, 2.20GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Lenovo DirectShare• Cyberlink Power2Go (DVD±RW)
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;		<div>65-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® qualified RoHS-compliant</div> <div>Limited Warranty¹² ➤ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ➤ Mail In repair service ➤ Service upgrade options⁵⁸ (in eligible locations):⁹<ul style="list-style-type: none">• 3-year Depot warranty 78Y1538• 1-year Mail In with accidental damage protection 55Y2511• 3-year Mail In with accidental damage protection 78Y1539• 3-year Onsite warranty 78Y1540• 1-year Onsite with accidental damage protection 78Y1533➤ Toll-free support for warranty issues during the warranty period¹² via 877-453-6686</div>
Diskette drive	None		
Optical	None <i>Some:</i> DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in		
SATA disk	500GB (5400 rpm) or 750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high		
Widescreen display	17.3" (439.4mm) HD+ (1600x900) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor , external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector (HDCP-compliant)		
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key		
Numeric keypad	Numeric keypad on right of keyboard		
Touch pad	Two-button touch pad with scroll feature, multi-touch		
Dimensions ³	(WxDxH): 16.38" x 10.71" x 1.42" to 1.77"; 416mm x 272mm x 36.1 to 44.9mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : from 6.61 lb (3.0kg)		
Case color	Dark brown top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	<i>Integrated models</i> : up to 5 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Four USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCI Express Mini Card slot		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip		
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface		
Modem	None		
Ethernet	10/100 ethernet, Atheros AR8152L		
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	Hard disk password, user password, administrator password, security lockhole		
Fingerprint reader	None		

See footnotes for important warranty information

US models announced December 21, 2011; previous models on June 08 or October 13, 2011

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(BUD1-2) December 2011

Lenovo® G770 (1037) - Discrete (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Graphics	SATA disk	Optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue- tooth	Battery cells	Win7 preload
1037-2KU	i5-2410M	2.30	2.90	4+2GB	17.3" HD+	2.0M HD	6650M	750GB ⁸	Blu-ray	11b/g/n ²⁸	Dark brown	HDMI	BT2.1	6-cell	Prem 64
<ul style="list-style-type: none">• 17.3" widescreen, glossy display• Integrated 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face• Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	Widescreen flexibility; two-spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache) , integrated Intel HD Graphics 3000, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology											Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Lenovo DirectShare• Cyberlink Power2Go (Blu-ray)			
Diskette drive	None														
Optical	Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in														
SATA disk	750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high														
Widescreen display	17.3" (439.4mm) HD+ (1600x900) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus														
Graphics	AMD Radeon™ HD 6650M , PCI Express® x16, 1GB DDR3 memory, DirectX® 11, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector (HDCP-compliant)														
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key														
Numeric keypad	Numeric keypad on right of keyboard														
Touch pad	Two-button touch pad with scroll feature, multi-touch														
Dimensions ³	(WxDxH): 16.38" x 10.71" x 1.42" to 1.77"; 416mm x 272mm x 36.1 to 44.9mm											90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® qualified RoHS-compliant			
Weight ²	with optical drive and battery: 6-cell : from 6.61 lb (3.0kg)														
Case color	Dark brown top, black bottom														
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic														
Battery - type	Lithium Ion 6-cell														
Battery - life ¹⁰	Discrete models : up to 4.5 hr														
Chipset	Mobile Intel HM65 Express Chipset											Limited Warranty¹² ➤ 1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter ➤ Mail In repair service ➤ Service upgrade options⁵⁸ (in eligible locations): ⁹ <ul style="list-style-type: none">• 3-year Depot warranty 78Y1538• 1-year Mail In with accidental damage protection 55Y2511• 3-year Mail In with accidental damage protection 78Y1539• 3-year Onsite warranty 78Y1540• 1-year Onsite with accidental damage protection 78Y1533 ➤ Toll-free support for warranty issues during the warranty period¹² via 877-453-6686			
ExpressCard/34	None														
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)														
Ports	Four USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
TV tuner	None														
PCIe Mini Card	One PCI Express Mini Card slot														
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip														
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface														
Modem	None														
Ethernet	10/100 ethernet, Atheros AR8152L														
Audio support	High Definition (HD) Audio, Conexant® CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)														
Security	Hard disk password, user password, administrator password, security lockhole														
Fingerprint reader	None														

See footnotes for important warranty information
US model announced July 6, 2011

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Lenovo® G770 (1037) - Discrete (Windows 7) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Max turbo (GHz)	Memory	Widescreen display	Cam- era	Graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Top color	HDMI connector	Blue- tooth	Battery cells	Win7 preload
1037-2JU	i5-2410M	2.30	2.90	4GBx2	17.3" HD+	2.0M	HD 6650M	750GB ⁸	DVD±RW	11b/g/n ²⁸	Dark brown	HDMI	BT2.1	6-cell	Prem 64
1037-5LU	i5-2430M	2.40	3.00	4GBx2	17.3" HD+	2.0M	HD 6650M	750GB	Blu-ray	11b/g/n	Dark brown	HDMI	BT2.1	6-cell	Prem 64

- 17.3" widescreen, glossy display
- Integrated 2.0 megapixel camera and Lenovo's VeriFace facial recognition software helps control access to your notebook by recognizing your face
- Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Widescreen flexibility; two-spindle</i> Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Lenovo ReadyComm• ooVoo™• McAfee® VirusScan® Plus (60 days of virus definitions)• Adobe® Reader®• Windows Live™ Essentials• CyberLink YouCam• Microsoft Office 2010 preloaded; purchase product key to activate• VeriFace™• Lenovo Energy Management Software• Lenovo DirectShare• Cyberlink Power2Go (DVD±RW) 90-watt AC adapter Wireless on/off switch EPEAT™ Gold rating ENERGY STAR® qualified RoHS-compliant
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;		
Diskette drive	None		
Optical	<i>Some:</i> DVD burner, dual-layer support, fixed, not removable, 12.7mm high, tray-in <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray burning), DVD recordable, 12.7mm, tray-in		
SATA disk	750GB (5400 rpm) / SATA 3.0Gb/s, 7mm or 9.5mm high		
Widescreen display	17.3" (439.4mm) HD+ (1600x900) TFT color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Graphics	AMD Radeon™ HD 6650M , PCI Express® x16, 1GB DDR3 memory, DirectX® 11, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI connector (HDCP-compliant)		
Keyboard	Full-size keyboard, multimedia Fn keys, recovery key		
Numeric keypad	Numeric keypad on right of keyboard		
Touch pad	Two-button touch pad with scroll feature, multi-touch		
Dimensions ³	<i>(WxDxH):</i> 16.38" x 10.71" x 1.42" to 1.77"; 416mm x 272mm x 36.1 to 44.9mm		
Weight ²	with optical drive and battery: <i>6-cell</i> : from 6.61 lb (3.0kg)		
Case color	Dark brown top, black bottom		
Case material	Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic		
Battery - type	Lithium Ion 6-cell		
Battery - life ¹⁰	<i>Discrete models:</i> up to 4.5 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard/34	None		
Multicard reader	5-in-1 reader (MMC, Memory Stick®, Memory Stick PRO™, Secure Digital Card, xD-Picture Card™)		
Ports	Four USB 2.0, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
TV tuner	None		
PCIe Mini Card	One PCI Express Mini Card slot		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card adapter, Broadcom® or Atheros® chip		
Bluetooth™	Bluetooth 2.1 wireless + EDR, USB 2.0 interface		
Modem	None		
Ethernet	10/100 ethernet, Atheros AR8152L		
Audio support	High Definition (HD) Audio, Conexant™ CX20671 codec / stereo speakers (1.5 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	Hard disk password, user password, administrator password, security lockhole		
Fingerprint reader	None		

Limited Warranty ¹²		
⇨	1-year warranty*: * 1- year on major electronic components (including battery), 90-day on keyboard, hinges, plastics, power cord, AC adapter	
⇨	Mail In repair service	
⇨	Service upgrade options ⁵⁸ (in eligible locations): ⁹	
	• 3-year Depot warranty	78Y1538
	• 1-year Mail In with accidental damage protection	55Y2511
	• 3-year Mail In with accidental damage protection	78Y1539
	• 3-year Onsite warranty	78Y1540
	• 1-year Onsite with accidental damage protection	78Y1533
⇨	Toll-free support for warranty issues during the warranty period ¹² via 877-453-6686	

See footnotes for important warranty information

US model(s) announced December 21, 2011; previous models on June 8, 2011

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Partial list of Lenovo® Care Services²²
for Lenovo Essential notebooks

For more information see:
http://www.lenovo.com/services_warranty/us/en/index.html

Lenovo Care service upgrade options

Lenovo Value Line notebooks with 1-year Mail In warranty

Mail in = Mail In repair, ADP = Accidental Damage Protection

2-year Depot warranty	78Y1534
3-year Depot warranty	78Y1538
1-year Mail In warranty with ADP	55Y2511
2-year Mail In warranty with ADP	78Y1535
3-year Mail In warranty with ADP	78Y1539

LOR = Lenovo Onsite Repair, ADP = Accidental Damage Protection

1-year LOR warranty 9x5 NBD	78Y1532
2-year LOR warranty 9x5 NBD	78Y1536
3-year LOR warranty 9x5 NBD	78Y1540
1-year LOR warranty 9x5 NBD with ADP	78Y1533
2-year LOR warranty 9x5 NBD with ADP	78Y1537
3-year LOR warranty 9x5 NBD with ADP	78Y1541

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

- ¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
- ² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
- ³ **Thinness** may vary at certain points on the system.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- ⁵ **Post-warranty annual maintenance agreement:** Service begins at the end of the base warranty or the end of any other applied warranty and maintenance option, whichever occurs last. Service delivery is not available the same day the maintenance agreement is purchased. Maintenance agreements must be purchased and the registration successfully completed prior to the service being available.
- ⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
- ⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. Even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.
- ⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ⁹ **Service upgrade options:** Upgrades do not apply to components covered for 90 days. Those remain at 90-day warranty
- ¹⁰ **Battery:** These model numbers achieved Battery Rundown Time of at least the time shown during testing. A description of the testing available at lenovo.com/pc/www/thinkpad/batterylife. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- ¹¹ **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.
- ¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ¹³ **Onsite Service:** If a machine is listed as having "On-site", this means that on-site service is available for the replacement of parts for warranty repairs. Certain parts, referred to as Customer Replaceable Unit ("CRU") parts, are easy to install and require little or no tools or technical knowledge. Some examples of CRU parts are mice, keyboards, hard disk drives, speakers, and memory. If your problem can be resolved with a CRU, the Support Center will offer to ship the part to you for you to install.
- ¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.
- ¹⁵ **Modem speeds:** Public network download 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.
- ¹⁶ **International Warranty Service** is available for most products 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.
- ¹⁷ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary and may exclude some holidays.
- ¹⁸ **EasyServ depot repair:** The customer may be asked certain diagnostic questions before a courier is sent. Your purchase includes this depot repair service, available in the U.S. during the limited warranty period.
- ¹⁹ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.
- ²⁰ **For combination drives,** maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.
- ²¹ **Lenovo Care 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 can be express shipped to you for quick replacement. For 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 terms and conditions for complete details and restrictions.
- ²² **Wireless WAN Cards:** Wireless data service requires separate agreement with Verizon Wireless. Verizon Wireless, not Lenovo, is solely responsible for service. Monthly and airtime charges may apply. Service may not be available in all areas; purchaser is responsible for verifying with Verizon Wireless that service is available for the intended location before the purchase of the card. For complete details, including service plans, additional required hardware or software, and service coverage, visit www.verizonwireless.com.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

⁵⁸ **Service upgrade options for Split Warranty:** (1) Mail In upgrades cover all components except power adapter, keyboard, plastics, and hinges after 90 days through end of first year. The "Mail-In" upgrades require customer to pay the leg of shipping into the depot repair center. (2) Onsite upgrades cover all components except power adapter, keyboard, plastics, and hinges after 90 days through end of term selected. (3) Accidental Damage Protection covers all components through the end of the term selected.

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December 2011
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Personal Systems Reference Lenovo® Essential Desktops

December 2011 - Version 411



C200 series All-In-One



C315 series All-In-One

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Lenovo C200
Black



Lenovo C200
Black



Lenovo C200
Black

Type-model	Processor	GHz	Memory	Wide-screen display	Touch screen	Camera (mega-pixel)	Graphics	SATA disk	SATA optical	Color	TV tuner	PCIe Mini Card 802.11	Blue-tooth	Win7 preload	Avail date
4025-1BU	Atom D510	1.66	2GB DDR2	18.5" HD	Touch	0.3M	NVIDIA ION	320GB ⁸	DVD±RW	Black	None	11b/g/n ²⁸	None	Prem 32	Apr 10
4025-1CU	Atom D510	1.66	2GB DDR2	18.5" HD		0.3M	NVIDIA ION	320GB	DVD±RW	Black	None	11b/g/n	None	Prem 32	Apr 10
4025-3GU	Atom D510	1.66	1GB DDR2	18.5" HD		0.3M	GMA 3150	250GB	DVD±RW	Black	None	11b/g/n	None	Prem 32	Aug 10
4025-3LU	Atom D525	1.80	1GB DDR3	18.5" HD		0.3M	GMA 3150	250GB	DVD±RW	Black	None	11b/g/n	None	Prem 32	Mar 11

- **All-In-One design with 18.5" 16:9 wide screen**
- **Some: touchscreen supports one-finger touch**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **Easily adjustable stand (-5° to +25° viewing angle)**
- **These systems are Microsoft Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Atom™ Processor D510 with dual-core , integrated DDR2 memory controller (up to 800MHz), Hyper-Threading Technology, and 1MB L2 cache Intel Atom Processor D525 with dual-core , integrated DDR2/DDR3 memory controller (up to 800MHz), Hyper-Threading Technology, and 1MB L2 cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 32 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW)• Corel® WinDVD®• Lenovo IdeaTouch (Touch models) – Lenovo VeriTouch• Windows Live Essential• Microsoft® Office 2010 preloaded; purchase product key to activate
Memory	1GB or 2GB std / 4GB max ⁷ / non-parity, single-channel <i>Some: PC2-5300 667MHz DDR2</i> , two 200-pin SO-DIMM sockets; <i>Some: PC3-6400 800MHz DDR3</i> , two 204-pin SO-DIMM sockets; <i>Non-Italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW	DVD burner, dual-layer support, fixed, removable, 12.7mm, tray-in	
SATA disk	250GB or 320GB , SATA 3.0Gb/s, 2.5" wide, 5400 rpm	
Widescreen display	18.5" (470mm) HD (1366x768) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; <i>Some: touchscreen supports one-finger touch</i>	
Camera Controls	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone Power button, brightness up, brightness down, and display on/off buttons	
Graphics	<i>Some: Intel Graphics Media Accelerator 3150 (GMA 3150)</i> , in processor; <i>Some: NVIDIA® ION™ graphics processor</i> , DirectX 10, PureVideo® HD technology, 256MB memory	
Chipset	Intel NM10 Express Chipset	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity)	
Ports	<i>Rear:</i> Three USB 2.0, ethernet (RJ-45), keyboard (PS/2), <i>Side:</i> Two USB 2.0	65-watt AC adapter RoHS-compliant
PCIe Mini Card	One Mini PCI Express Mini Card slot	Limited Warranty ¹² ➤ 1-year parts and labor ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ²³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553) ➤ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686
11b/g/n	11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom® BCM4313 or Atheros® AR9285	
TV tuner	None	
Bluetooth™	None	
Modem	None	
Ethernet	10/100 ethernet on planar, Intel® 82552V	
Audio support	High Definition (HD) Audio, RealTek® ALC662 codec / two stereo speakers (3 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)	
Security	Power-on password, supervisor password, security lockhole	
Keyboard	PS/2 full-size keyboard, black	
Mouse	USB Optical Wheel Mouse, black	
Remote control	None	
Dimensions ³	<i>(WxHxD) including stand:</i> 18.12" x 15.13" x 6.63"; 460.3mm x 384.3mm x 168.3mm	
Weight ²	<i>Non-touchscreen model:</i> 16.0lb (7.26kg); <i>Touchscreen model:</i> 17.1lb (7.76kg)	
Chassis	Front bezel: black color; back bezel: black color	
Stand	Easily adjustable stand (-5° to +25° viewing angle)	

See footnotes for important warranty information

ⓘ US model announced March 23, 2011; previous models on April 28 or August 25, 2010

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Lenovo® C200 (4025) - Windows 7 (web only models)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Touch screen	Camera (mega-pixel)	Graphics	SATA disk	SATA optical	Color	TV tuner	PCIe Mini Card 802.11	Blue-tooth	Win7 preload	Avail date
4025-3HU	Atom D410	1.66	2GB	18.5" HD	None	0.3M	GMA 3150	320GB ⁸	DVD±RW	Black	None	11b/g/n ²⁸	None	Prem 32	Sep 10
4025-3JU	Atom D510	1.66	2GBx2	18.5" HD	None	0.3M	GMA 3150	500GB	DVD±RW	Black	None	11b/g/n	None	Prem 64	Sep 10
4025-3KU	Atom D510	1.66	2GBx2	18.5" HD	None	0.3M	NVIDIA ION	500GB	DVD±RW	Black	None	11b/g/n	None	Prem 64	Sep 10

- **All-In-One design with 18.5" 16:9 wide screen**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**
- **Easily adjustable stand (-5° to +25° viewing angle)**

Processor	Intel® Atom™ Processor D410 with single-core, integrated DDR2 memory controller (up to 800MHz), Hyper-Threading Technology, and 512KB L2 cache or Intel Atom Processor D510 with dual-core , integrated DDR2 memory controller (up to 800MHz), Hyper-Threading Technology, and 1MB L2 cache	Preloaded operating system ²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Home Premium 32- <i>Some:</i> Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW)• Corel® WinDVD®• Lenovo IdeaTouch (Touch models) – Lenovo VeriTouch• Windows Live Essential• Microsoft® Office 2007 Trial (60-day)
Memory	2GB or 4GB std / 4GB max ⁷ / PC2-5300 667MHz DDR2 , non-parity, single-channel, two 200-pin SO-DIMM sockets	
SATA optical	DVD burner, dual-layer support, fixed, removable, 12.7mm, tray-in	
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 2.5" wide, 5400 rpm	
Widescreen display	18.5" (470mm) HD (1366x768) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone	65-watt AC adapter RoHS-compliant
Controls	Power button, brightness up, brightness down, and display on/off buttons	
Graphics	<i>Some:</i> Intel Graphics Media Accelerator 3150 (GMA 3150) , in processor; <i>Some:</i> NVIDIA® ION™ graphics processor , DirectX® 10, PureVideo® HD technology, 256MB memory	
Chipset	Intel NM10 Express Chipset	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity)	
Ports	<i>Rear:</i> Three USB 2.0, ethernet (RJ-45), keyboard (PS/2) <i>Side:</i> Two USB 2.0	
PCIe Mini Card	One Mini PCI Express Mini Card slot	
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom® BCM4313 or Atheros® AR9285	
TV tuner	None	
Bluetooth™	None	
Modem	None	
Ethernet	10/100 ethernet on planar, Intel® 82552V	
Audio support	High Definition (HD) Audio, Realtek® ALC662 codec / two stereo speakers (3 watt x 2) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)	
Security	Power-on password, supervisor password, security lockhole	
Keyboard	PS/2 full-size keyboard, black	
Mouse	USB Optical Wheel Mouse, black	
Remote control	None	
Dimensions ³	<i>(WxHxD) including stand:</i> 18.12" x 15.13" x 6.63"; 460.3mm x 384.3mm x 168.3mm	
Weight ²	<i>Non-touchscreen model:</i> 16.0lb (7.26kg); <i>Touchscreen model:</i> 17.1lb (7.76kg)	
Chassis	Front bezel: black color; back bezel: black color	
Stand	Easily adjustable stand (-5° to +25° viewing angle)	

Limited Warranty ¹² <ul style="list-style-type: none">⇨ 1-year parts and labor⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇨ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553)⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686

See footnotes for important warranty information
US models announced September 8, 2010

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Type-model	Pro- cessor	GHz	Memory	Wide- screen display	CCFL or LED	Touch screen	Camera (mega- pixel)	Graphics	SATA disk	SATA optical	Color	TV tuner	PCIe Mini Card 802.11	Blue- tooth	AC adapter	Win7 preload
7729-1LU	E-350	1.60	2GBx1	18.5" HD	LED	None	0.3M	HD6310	320GB ⁸	DVD±RW	Black	None	11b/g/n ²⁸	None	65W	Home Prem 64
7729-1KU	E-350	1.60	4GBx1	18.5" HD	LED	None	0.3M	HD6310	500GB	DVD±RW	Black	None	11b/g/n	None	65W	Home Prem 64

- **All-In-One design with 18.5" 16:9 wide screen**
- **Some: touchscreen supports one-finger touch**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **Easily adjustable stand (-5° to +20° viewing angle)**
- **These systems are Microsoft Office 2010 Product Key Ready (O10PKR)**

Processor	AMD Accelerated Processor E-350 (dual-core, 1.60GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)	Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW)• CyberLink YouCam• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– PhotoStudio Paint– Lenovo Ebook and Quick Notes• Windows Live Essential• Microsoft® Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System• Lenovo Eye Distance System <i>Integrated models:</i> 65-watt AC adapter <i>Discrete models:</i> 90-watt AC adapter RoHS-compliant
Memory	8GB max ⁷ / non-parity, PC3-10600 1333MHz DDR3* , two 204-pin SO-DIMM sockets; * System automatically clocks down for processors with 1066MHz DDR3 memory controller	
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, removable, 12.7mm, tray-in 320GB (5400 rpm) or 500GB (5400 rpm), SATA 3.0Gb/s, 2.5" wide	
Widescreen display	18.5" (470mm) HD (1366x768) TFT color, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; <i>Some:</i> touchscreen supports one-finger touch	
Camera Controls	Camera on top of screen, 0.3-megapixel, fixed focus Power button, brightness up, brightness down, and display on/off buttons	
Graphics	AMD Radeon HD 6310 Graphics in processor, DirectX® 11, use system memory	
Chipset	AMD A45 FCH	
Multicard reader	5-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity)	
Ports	<i>Rear:</i> Three USB 2.0, ethernet (RJ-45), keyboard (PS/2), <i>Side:</i> Two USB 2.0	
PCIe Mini Card 11b/g/n ²⁸ TV tuner Bluetooth™ Modem Ethernet Audio support	Two PCIe Mini Card slots (one full size and one half size) 11b/g/n wireless ⁴ , PCIe Mini Card, Broadcom®, Realtek®, or Atheros® chip None None None Gigabit ethernet on planar, Realtek RTL8111E High Definition (HD) Audio, Realtek ALC662 codec / two stereo speakers (3 watt x 2) / mono microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)	
Security	Power-on password, administrator password, security lockhole	
Keyboard Mouse Remote control	PS/2 full-size keyboard, black USB Optical Wheel Mouse, black None	
Dimensions ³ Weight ²	<i>(WxHxD) including stand:</i> 18.12" x 15.13" x 6.63"; 460.3mm x 384.3mm x 168.3mm <i>Non-touchscreen model:</i> 12.8lb (5.8kg); <i>Touchscreen model:</i> 13.4lb (6.1kg)	
Chassis Stand	Front bezel: black color; back bezel: black color Easily adjustable stand (-5° to +20° viewing angle)	
		Limited Warranty ¹² <ul style="list-style-type: none">⇨ 1-year parts and labor⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇨ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553)⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686

See footnotes for important warranty information
US models announced September 1, 2011

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Lenovo C315



Lenovo C315



Lenovo C315



Lenovo C315

Type-model	Processor	GHz	Memory	Wide-screen display	Multi-Touch screen	Camera (mega-pixel)	Discrete graphics	SATA disk	SATA optical	TV tuner	Remote control	PCIe Mini Card 802.11	Blue-tooth	Win7 preload	Avail date
4022-1AU	Athlon II X2 250u	1.60	2GB	20" HD+	Multi	0.3M	HD 4530	320GB ⁸	DVD±RW	None	None	11b/g ²⁸	None	Prem 32	Apr 10

- **All-In-One design with 20" 16:9 multi-touch screen**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**
- **Advanced hinge design allows changing the screen angle with only one hand, and resting the screen angle at any intermediate position between 12° and 40°**

Processor	AMD® Athlon™ II X2 Processor 250u with dual-core, 3200MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR2 memory controller, and 2MB L2 cache (1MB per core)	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 32
Memory	2GB std / 4GB max ⁷ / PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; <i>Non-Italics</i> : standard memory in one sockets; one socket available	Preloaded applications¹⁴ (only some listed) • Lenovo OneKey Recovery • Driver and Application Installation • McAfee® VirusScan® Plus (60 days of virus definitions) • Cyberlink Power2Go (DVD±RW) • Lenovo IdeaTouch – PowerCinema – Lenovo VeriTouch – AutoCollage Touch • Windows Live Essential • Microsoft® Office 2007 Trial (60-day)
SATA DVD±RW disk	DVD burner, dual-layer support, fixed, removable, 12.7mm, tray-in 320GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm	
Widescreen display	20" (508mm) HD+ (1600x900) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, MultiTouch	
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone	
Controls	Power button, touch-sensitive buttons for brightness +/-, volume +/-, and display on/off	
Discrete Graphics	ATI™ Mobility Radeon™ HD 4530 , PCI Express® x16, 512MB memory, DirectX® 10, ATI Avivo™ HD	
Chipset	AMD 690M Chipset , SB600 south bridge	
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital Elite Pro Card, xD-Picture Card™)	
Ports	<i>Rear</i> : Four USB 2.0, ethernet (RJ-45), keyboard (PS/2), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) <i>Side</i> : Two USB 2.0	120-watt AC adapter RoHS-compliant
PCIe Mini Card	Two Mini PCI Express Mini Card slots	Limited Warranty¹² ⇨ 1-year parts and labor ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Service upgrade options (in eligible locations):⁹ • 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552) • 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553) ⇨ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
11b/g ²⁸	11b/g wireless ⁴ , Mini PCIe adapter, Broadcom® BCM4312	
TV tuner	None	
Bluetooth™	None	
Modem	None	
Ethernet	10/100 ethernet on planar, Broadcom® BCM5787	
Audio support	High Definition (HD) Audio, RealTek® ALC262 codec / two stereo speakers (2 watt) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)	
Security	Power-on password, supervisor password, security lockhole	
Keyboard	PS/2 full-size keyboard, black	
Mouse	USB Optical Wheel Mouse, black	
Remote control	None	
Dimensions ³	(WxHxD): 19.05" x 14.12" x 2.56"; 484mm x 359mm x 65mm	
Weight ²	16.3 lb (7.4 kg)	
Chassis	Front bezel: brown color; back bezel: black color	
Stand	Fold-away stand (adjustable between 12° and 40°)	

See footnotes for important warranty information
US model announced April 28, 2010

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Lenovo® C315 (4022) - Windows 7 (web only models)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Multi-Touch screen	Camera (mega-pixel)	Discrete graphics	SATA disk	SATA optical	TV tuner	Remote control	PCIe Mini Card 802.11	Blue-tooth	Win7 preload	Avail date
4022-1FU	Athlon II X2 250u	1.60	2GB	20" HD+	Multi	0.3M	HD 4530	320GB ⁸	DVD±RW	TV	Remote	11b/g ²⁸	None	Prem 32	Apr 10
4022-1GU	Athlon II X2 250u	1.60	4GB	20" HD+	Multi	0.3M	HD 4530	500GB	DVD±RW	TV	Remote	11b/g	None	Prem 64	Apr 10

- **All-In-One design with 20" 16:9 multi-touch screen**
- **Lenovo® Rescue System provides OneKey recovery without booting into Windows**
- **Advanced hinge design allows changing the screen angle with only one hand, and resting the screen angle at any intermediate position between 12° and 40°**

Processor	AMD® Athlon™ II X2 Processor 250u with dual-core, 3200MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR2 memory controller, and 2MB L2 cache (1MB per core)		Preloaded operating system ²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Home Premium 32- <i>Some:</i> Genuine Windows 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW)• Lenovo IdeaTouch<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– AutoCollage Touch• Windows Live Essential• Microsoft® Office 2007 Trial (60-day)
Memory	2GB or 4GB std / 4GB max ⁷ / PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-Italics:</i> standard memory in one sockets; one socket available		
SATA DVD±RW SATA disk	DVD burner, dual-layer support, fixed, removable, 12.7mm, tray-in 320GB or 500GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm		
Widescreen display	20" (508mm) HD+ (1600x900) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio, MultiTouch		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, with mono microphone		
Controls	Power button, touch-sensitive buttons for brightness +/-, volume +/-, and display on/off		
Discrete Graphics	ATI™ Mobility Radeon™ HD 4530 , PCI Express® x16, 512MB memory, DirectX® 10, ATI Avivo™ HD		
Chipset	AMD 690M Chipset , SB600 south bridge		
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital Elite Pro Card, xD-Picture Card™)		
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), keyboard (PS/2), TV antenna connector, IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) <i>Side:</i> Two USB 2.0		
PCIe Mini Card 11b/g ²⁸ TV tuner	Two Mini PCI Express Mini Card slots 11b/g wireless ⁴ , Mini PCIe adapter, Broadcom® BCM4312 AverMedia Hybrid TV MiniCard A317, PCIe Mini Card adapter, supports analog (NTSC) and digital (ATSC) signal		120-watt AC adapter RoHS-compliant
Bluetooth™	None		Limited Warranty ¹² <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553)⇒ 24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686
Modem	None		
Ethernet	10/100 ethernet on planar, Broadcom® BCM5787		
Audio support	High Definition (HD) Audio, RealTek® ALC262 codec / two stereo speakers (2 watt) / microphone, microphone input jack (3.5 mm), headphone jack (3.5 mm)		
Security	Power-on password, supervisor password, security lockhole		
Keyboard	PS/2 full-size keyboard, black		
Mouse	USB Optical Wheel Mouse, black		
Remote control	Philips®Win7 MCE remote control (40-button)		
Dimensions ³	<i>(WxHxD):</i> 19.05" x 14.12" x 2.56"; 484mm x 359mm x 65mm		
Weight ²	16.3 lb (7.4 kg)		
Chassis	Front bezel: brown color; back bezel: black color		
Stand	Fold-away stand (adjustable between 12° and 40°)		

See footnotes for important warranty information
US models announced April 28, 2010

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Limited Warranty¹²

⇒ **1-year parts and labor**

⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts²³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**

⇒ **Service upgrade options (in eligible locations):⁹**

- **2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)**
- **3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553)**

⇒ **24x7¹⁶ toll-free support for warranty issues during the warranty period¹² via 877-453-6686**



Lenovo C225/C325



Lenovo C225/C325



Lenovo C225/C325



Lenovo C225/C325



Lenovo C225/C325

Lenovo® C225 (3079) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Memory	Wide- screen display	CCFL or LED	Touch screen	Camera (mega- pixel)	Graphics	SATA disk	SATA optical	Color	TV tuner	PCIe Mini Card 802.11	Blue- tooth	Keyboard/ Mouse	Win7 preload
3079-2AU	E-450	1.65	4+2GB	18.5" HD	LED	None	0.3M	HD 6320	1TB ⁸	DVD±RW	Black	None	11b/g/n ²⁸	None	USB/Black	Prem 64
3079-3AU	E-450	1.65	2GBx2	18.5" HD	LED	None	0.3M	HD 6320	500GB	DVD±RW	White	None	11b/g/n	None	USB/White	Prem 64

- **All-In-One design with 18.5" 16:9 wide screen**
- **SRS® Premium Sound audio enhancement for immersive surround sound**
- **Audio-in port to play music from your MP3 player without switching on the computer**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **Stable full-metal stand with 5° forward / 25° backward viewing angle adjustment**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	AMD Accelerated Processor E-450 (dual-core, 1.65GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6320 Graphics, integrated DDR3 memory controller (up to 1333MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW)• CyberLink YouCam• Lenovo Fun Zone• Power Setting• SRS Premium Sound• Windows Live Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System• Lenovo Eye Distance System
Memory	8GB max ⁷ / non-parity, PC3-10600 1333MHz DDR3 , two 204-pin SO-DIMM sockets		
SATA DVD±RW	DVD burner, dual-layer support, fixed, removable, 12.7mm, tray-in		
SATA disk	500GB (7200 rpm) or 1TB (7200 rpm), SATA 3.0Gb/s, 3.5" wide		
Widescreen display	18.5" (470mm) HD (1366x768) TFT color, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	None		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus		
Controls	Power on/off, menu, left, right, and display on/off buttons		
Graphics	AMD Radeon HD 6320 Graphics in processor, DirectX® 11, use system memory		
Chipset	AMD A45 FCH		
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity, Secure Digital Extended Capacity)		
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), optional TV tuner connector on models equipped with TV tuner <i>Side:</i> Two USB 2.0		
PCIe Mini Card	Two PCIe Mini Card slots (one full size and one half size)		
11b/g/n ²⁸	11b/g/n wireless ⁴ , PCIe half Mini Card, Broadcom®, Realtek®, or Atheros® chip		
TV tuner	None		
Bluetooth™	None		
Modem	None		
Ethernet	Gigabit ethernet on planar, Realtek RTL8111E		
Audio support	High Definition (HD) Audio, Realtek ALC272 codec / SRS® Premium Sound™ certified / two stereo speakers (3 watt x 2) / internal mono microphone, audio-in/microphone jack (3.5 mm), headphone jack (3.5 mm)		
Security	Power-on password, administrator password, security lockhole		
Keyboard	<i>Some:</i> USB full-size keyboard, black <i>Some:</i> USB full-size keyboard, white		
Mouse	<i>Some:</i> USB Optical Wheel Mouse, black <i>Some:</i> USB Optical Wheel Mouse, white		
Remote control	None		
Dimensions ³	(WxHxD) including stand: 18.09" x 15.59" x 9.38"; 459.5mm x 396.1mm x 238.2mm		
Weight ²	From 12.65lb (5.74kg), vary by configuration		
Chassis	Front bezel: black or white color; back bezel: black or white color		
Stand	Easily adjustable stand (5° forward / 25° backward viewing angle adjustment)		
65-watt AC adapter ENERGY STAR® qualified RoHS-compliant			
Limited Warranty ¹² ➤ 1-year parts and labor ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ²³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553) ➤ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686			

See footnotes for important warranty information
US models announced December 21, 2011

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Lenovo® C325 (3095) - web only models

Personal Systems Reference (PSREF)

Type-model	Pro- cessor	GHz	Memory	Wide- screen display	CCFL or LED	Multi- Touch screen	Camera (mega- pixel)	Graphics	SATA disk	SATA optical	Color	TV tuner	PCIe Mini Card 802.11	Remote control	Keyboard/ Mouse	Win7 preload
3095-2AU	E-450	1.65	4+2GB	20.0" HD	LED		0.3M	HD 6320	1TB ⁸	DVD±RW	White		11b/g/n ²⁸		USB/White	Prem 64
3095-3AU	E-450	1.65	4GBx2	20.0" HD	LED		0.3M	HD 6320	1TB	DVD±RW	Black		11b/g/n		USB/Black	Prem 64
3095-4AU	E-450	1.65	4+2GB	20.0" HD	LED	Multi	0.3M	HD 6320	1TB	DVD±RW	Black	TV	11b/g/n	Remote/Black	USB/Black	Prem 64
3095-5AU	E-450	1.65	4+2GB	20.0" HD	LED		0.3M	HD 6320	1TB	DVD±RW	White	TV	11b/g/n	Remote/White	USB/White	Prem 64
3095-6AU	E-450	1.65	4GBx2	20.0" HD	LED		0.3M	HD 6320	1TB	DVD±RW	Black	TV	11b/g/n	Remote/Black	USB/Black	Prem 64

- **All-In-One design with 20.0" 16:9 wide screen with optional multi-touch**
- **SRS® Premium Sound audio enhancement for immersive surround sound**
- **Audio-in port to play music from your MP3 player without switching on the computer**
- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **Stable full-metal stand with 5° forward / 25° backward viewing angle adjustment**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**


Processor	AMD Accelerated Processor E-450 (dual-core, 1.65GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6320 Graphics, integrated DDR3 memory controller (up to 1333MHz)		Preloaded operating system ²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications ¹⁴ (only some listed) <ul style="list-style-type: none">• Lenovo OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Cyberlink Power2Go (DVD±RW)• CyberLink YouCam• Lenovo Fun Zone• Power Setting• SRS Premium Sound• Lenovo IdeaTouch (Touch models)<ul style="list-style-type: none">– PowerCinema– Lenovo VeriTouch– PhotoStudio Paint– Lenovo Ebook and Quick Notes• Windows Live Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate• Lenovo Dynamic Brightness System• Lenovo Eye Distance System
Memory	8GB max ⁷ / non-parity, PC3-10600 1333MHz DDR3 , two 204-pin SO-DIMM sockets		
SATA DVD±RW	DVD burner, dual-layer support, fixed, removable, 12.7mm, tray-in		
SATA disk	1TB (7200 rpm), SATA 3.0Gb/s, 3.5" wide		
Widescreen display	20.0" (508mm) HD+ (1600x900) TFT color, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio		
Multi-touch	<i>Some:</i> multi-touch, 2-point support		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus		
Controls	Power on/off, menu, left, right, and display on/off buttons		
Graphics	AMD Radeon HD 6320 Graphics in processor, DirectX® 11, use system memory		
Chipset	AMD A45 FCH		
Multicard reader	6-in-1 reader (MultiMedia Card, Memory Stick, Memory Stick PRO™, Secure Digital Card, Secure Digital High Capacity, Secure Digital Extended Capacity)		
Ports	<i>Rear:</i> Four USB 2.0, ethernet (RJ-45), optional TV tuner connector on models equipped with TV tuner <i>Side:</i> Two USB 2.0		
PCIe Mini Card	Two PCIe Mini Card slots (one full size and one half size)		
11b/g/n ²⁶	11b/g/n wireless ⁴ , PCIe half Mini Card, Broadcom®, Realtek®, or Atheros® chip		
TV tuner	<i>Some:</i> ATSC tuner, supports analog and digital signal, PCIe Mini Card		
Bluetooth™	None		
Modem	None		
Ethernet	Gigabit ethernet on planar, Realtek RTL8111E		
Audio support	High Definition (HD) Audio, Realtek ALC272 codec / SRS® Premium Sound™ certified / two stereo speakers (3 watt x 2) / internal mono microphone, audio-in/microphone jack (3.5 mm), headphone jack (3.5 mm)		
Security	Power-on password, administrator password, security lockhole		
Keyboard	<i>Some:</i> USB full-size keyboard, black <i>Some:</i> USB full-size keyboard, white		
Mouse	<i>Some:</i> USB Optical Wheel Mouse, black <i>Some:</i> USB Optical Wheel Mouse, white		
Remote control	<i>Some:</i> MCE remote control, via IR, black <i>Some:</i> MCE remote control, via IR, white		
Dimensions ³	<i>(WxHxD) including stand:</i> 19.65" x 16.82" x 9.38"; 499.0mm x 427.2mm x 238.2mm		
Weight ²	<i>Non-touch models:</i> from 13.9lb (6.3kg), vary by configuration <i>Touch models:</i> from 15.7lb (7.1kg), vary by configuration		
Chassis	Front bezel: black or white color; back bezel: black or white color		
Stand	Easily adjustable stand (5° forward / 25° backward viewing angle adjustment)		
			Limited Warranty ¹² ⇒ 1-year parts and labor ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ²³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Service upgrade options (in eligible locations): ⁹ <ul style="list-style-type: none">• 2-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo In-Home Repair 9x5 Next Business Day (78Y1553) ⇒ 24x7 ¹⁶ toll-free support for warranty issues during the warranty period ¹² via 877-453-6686

See footnotes for important warranty information
US models announced December 21, 2011

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Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ³	Media reader	SATA disk	SATA optical	Graphics	TV tuner	Power supply	Win7 preload	Avail date
0893-1EU	4x4	Athlon II X2 240	2.80	2MB	2	2GBx1	16-in-1	320GB ²	DVD±RW	Radeon 3000	None	180W	Prem 32	Aug 10
0893-1FU	4x4	Athlon II X2 240	2.80	2MB	2	2GBx2	16-in-1	1TB	DVD±RW	Radeon 3000	None	180W	Prem 64	Aug 10

- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	AMD® Athlon™ II X2 Processor 240 with dual-core, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, integrated DDR3 memory controller, and 2MB L2 cache (1MB per core)	Tower <ul style="list-style-type: none">• Black bezel with glossy finish• 6.9" W X 16.2" D X 14.2" H• 175mm W X 412mm D X 360mm H• 17.6 lb (8.0 kg), weight may vary by configuration
Implementation	Processor in Socket AM3	
Memory	2GB or 4GB std , 4GB max ⁸ , dual-channel capable, PC3-8500 1066MHz DDR3 , non-parity, two 240-pin DIMM sockets	Bay ① 5.25", 1.6" high, access, standard optical Bay ② N/A, N/A, N/A, media reader* Bay ③ 3.5", 1" high, no access, standard disk Bay ④ 3.5", 1" high, no access, optional disk * Only for optional 16-in-1 media reader
Graphics	ATI™ Radeon™ 3000 , integrated graphics in 760G, uses main memory, DirectX® 10, ATI Avivo™, one analog VGA DB-15 connector, one HDMI connector, HDCP	Slot 1: half-length,full-height, PCI Express x16 Ver 2.0 Slot 2: half-length,full-height, PCI Express x1 Ver 2.0 Slot 3: half-length,full-height, PCI Express x1 Ver 2.0 Slot 4: half-length,full-height, 32-bit PCI Ver 2.3
SATA disk	320GB or 1TB , SATA 3.0Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710	
SATA DVD±RW	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	None	
EIDE cables	None	
Diskette drive	None	
Media reader	16-in-1 media reader	
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, HDMI)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, Realtek® ALC662 codec	
External speakers	None	
Internal speaker	None	
Ethernet	10/100 ethernet on planar, Realtek 8103EL	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	None	
Keyboard	104-key standard keyboard (PS/2 connector)	
Mouse	Optical Wheel Mouse (USB connector)	
Power supply	180 watts, universal, manual switch	
Preloaded operating system ²⁰ <ul style="list-style-type: none">- <i>Some:</i> Genuine Windows® 7 Home Premium 32- <i>Some:</i> Genuine Windows 7 Home Premium 64		Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live™ Essential• Microsoft Office 2010 preloaded; purchase product key to activate• CyberLink Power2Go (DVD±RW)

Limited Warranty¹


- ⇒ 1-year parts and labor
- ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)
- ⇒ Service upgrade options (in eligible locations):⁹
 - 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)
 - 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)
- ⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

See footnotes for important warranty information
US models announced August 25, 2010

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Type-model	Slot x bay	Pro-cessor	GHz	Max turbo (GHz)	Memory ⁸	DIMM capacity	Media reader	SATA disk	SATA optical	Graphics	802.11 wireless	USB3.0	Power supply	Win7 preload	Avail date
7780-1PU	2x3	i3-2100	3.10	None	4GB	(2, 2)	8-in-1	1.5TB ²	DVD±RW	Intel HD Graphics	11b/g/n	None	180W	Prem 64	Jul 11
7780-1MU	2x3	G620	2.60	None	3GB	(1, 2)	8-in-1	500GB	DVD±RW	Intel HD Graphics	11b/g/n	None	180W	Prem 64	Jul 11
7780-1NU	2x3	G620	2.60	None	4GB	(2, 2)	8-in-1	1TB	DVD±RW	Intel HD Graphics	11b/g/n	None	180W	Prem 64	Jul 11
7780-4FU	2x3	G620	2.60	None	4GB	(4, 0)	8-in-1	500GB	DVD±RW	Intel HD Graphics	11b/g/n	None	180W	Prem 64	Dec 11
7780-3FU	2x3	i3-2120	3.30	None	4GB	(4, 0)	8-in-1	1.5TB	DVD±RW	Intel HD Graphics	11b/g/n	None	180W	Prem 64	Dec 11

- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.60 GHz, 3M Cache) , integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.10 GHz, 3M Cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2100 Processor (2 cores / 4 threads, 3.30 GHz, 3M Cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Small Form Factor <ul style="list-style-type: none">• Black bezel with glossy finish• 3.9" W X 15.7" D X 11.5" H• 100mm W X 400mm D X 293mm H• 21.5 lb (9.75 kg) vary by configuration Bay ① 5.25", 1.6" high, access, standard optical Bay ② 3.3", 0.6" high, access, 8-in-1 media reader Bay ③ 3.5", 1" high, no access, standard disk Slot 1: half-length, Low Profile, PCI Express x16 Ver 2.0** Slot 2: half-length, Low Profile, PCI Express x1 Ver 2.0* * Wireless adapter in slot in some models ** Graphics adapter in slot in some models
Implementation		
Memory	8GB max ⁸ , PC3-10600 1333MHz DDR3* , non-parity, dual-channel capable, two 240-pin DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller	
Graphics	Intel HD Graphics , integrated graphics in processor, uses main memory, DirectX® 10, one analog VGA DB-15 connector, one HDMI connector, HDCP-compliant (only for i3/i5/i7 models)	
SATA disk	500GB, 1TB, or 1.5TB , SATA 3.0Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset	
SATA optical	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors	
EIDE controller	None	
EIDE cables	None	
Diskette drive	None	
Media reader	8-in-1 media reader	
Chipset	Intel H61 Express Chipset	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, HDMI)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, ALC662 codec	
External speakers	None	
Internal speaker	None	
Wireless	11b/g/n wireless ⁴ , PCIe x1 adapter	
Ethernet	Gigabit ethernet on planar, Intel 82579V	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	None	
Keyboard	Full-size keyboard (PS/2 connector), Fn keys, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	180 watts, universal, manual switch	
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Home Premium 64 Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Cyberlink PowerDVD (DVD±RW)• CyberLink Power2Go (DVD±RW)• Windows Live Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate		Limited Warranty ¹ <ul style="list-style-type: none">⇨ 1-year parts and labor⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇨ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇨ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

See footnotes for important warranty information

US models announced December 21, 2011; previous models on July 6, 2011

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(RD2-2) December 2011

Lenovo® H330 (7780) - Windows 7 (web only models)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Pro-processor	GHz	Max turbo (GHz)	Memory ⁸	DIMM capacity	Media reader	SATA disk	SATA optical	Graphics	802.11 wireless	USB3.0	Power supply	Win7 preload	Avail date
7780-1HU	2x3	i5-2500	3.30	3.70	8GB	(4, 4)	8-in-1	1TB ²	Blu-ray	Radeon HD 6450	None	None	250W	Prem 64	Jun 11
7780-1JU	2x3	i3-2120	3.30		6GB	(4, 2)	8-in-1	500GB	DVD±RW	Intel HD Graphics	None	None	180W	Prem 64	Jun 11

- **Lenovo Rescue System provides OneKey recovery without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.30 GHz, 3MB Cache) , integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i5-2500 Processor (4 cores / 4 threads, 3.30 GHz, 6MB Cache) , Turbo Boost Technology 2.0 (up to 3.70 GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Small Form Factor <ul style="list-style-type: none">• Black bezel with glossy finish• 3.9" W X 15.7" D X 11.5" H• 100mm W X 400mm D X 293mm H• 21.5 lb (9.75 kg) vary by configuration Bay ① 5.25", 1.6" high, access, standard optical Bay ② 3.3", 0.6" high, access, 8-in-1 media reader Bay ③ 3.5", 1" high, no access, standard disk Slot 1: half-length, Low Profile, PCI Express x16 Ver 2.0** Slot 2: half-length, Low Profile, PCI Express x1 Ver 2.0* * Wireless adapter in slot in some models ** Graphics adapter in slot in some models
Implementation		
Memory	6GB or 8GB std, 8GB max⁸, PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets	
Graphics	<i>Some:</i> Intel HD Graphics , integrated graphics in processor, uses main memory, DirectX® 10, one analog VGA DB-15 connector, one HDMI connector, HDCP <i>Some:</i> AMD Radeon™ HD 6450, PCI Express® x16, 1GB memory , DirectX 11, one analog VGA DB-15 connector, one HDMI connector, HDCP	
SATA disk	500GB or 1TB , SATA 3.0Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset	
SATA optical	<i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive <i>Some:</i> Blu-ray™ Disc reader (no Blu-ray media burning), BD-ROM, DVD and CD recordable	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors	
EIDE controller	None	
EIDE cables	None	
Diskette drive	None	
Media reader	8-in-1 media reader	
Chipset	Intel H61 Express Chipset	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, HDMI)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, ALC662 codec	
External speakers	None	
Internal speaker	None	
Wireless	None	
Ethernet	Gigabit ethernet on planar, Intel 82579V	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	None	
Keyboard	Full-size keyboard (PS/2 connector), Fn keys, black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	<i>Some:</i> 180 watts, universal, manual switch <i>Some:</i> 250 watts, universal, auto-sensing	
Preloaded operating system²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Home Premium 64 Preloaded applications⁵ <ul style="list-style-type: none">• Lenovo® OneKey Recovery• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Lenovo Dynamic Brightness System• Lenovo Eye Distance System• Cyberlink PowerDVD (DVD±RW, Blu-ray)• CyberLink Power2Go (DVD±RW, Blu-ray)• Windows Live Essentials• Microsoft® Office 2010 preloaded; purchase product key to activate		Limited Warranty¹ <ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686


See footnotes for important warranty information
US models announced June 22, 2011

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Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	Media reader	SATA disk	SATA optical	Graphics	TV tuner	Power supply	Win7 preload	Avail date
7723-1AU	4x4	Athlon II X2 255	3.10	2MB	2	2GBx1	6-in-1	500GB ²	DVD±RW	Radeon 3000	None	180W	Prem 64	Jan 11
7723-1CU	4x4	Athlon II X4 645	3.10	2MB	4	2GBx2	6-in-1	1TB	DVD±RW	Radeon 3000	None	280W	Prem 64	Jan 11
7723-1DU	4x4	Athlon II X4 645	3.10	2MB	4	2+4GB	6-in-1	1TB	DVD±RW	Radeon 3000	None	280W	Prem 64	Jan 11
7723-1EU	4x4	Athlon II X2 255	3.10	2MB	2	2GBx2	6-in-1	500GB	DVD±RW	Radeon 3000	None	180W	Prem 64	Jan 11
7723-1FU	4x4	Athlon II X2 255	3.10	2MB	2	1+2GB	6-in-1	500GB	DVD±RW	Radeon 3000	None	180W	Prem 64	Jan 11

- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	AMD® Athlon™ II X2 Processor 255 with dual-core, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Athlon II X4 Processor 645 with quad-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512kB per core) Processor in Socket AM3	Tower <ul style="list-style-type: none">• Black bezel with glossy finish• 6.9" W X 16.9" D X 14.5" H• 175mm W X 430mm D X 368mm H• 17.6 lb (8.0 kg), weight may vary by configuration Bay ① 5.25", 1.6" high, access, standard optical Bay ② N/A, N/A, N/A, media reader* Bay ③ 3.5", 1" high, no access, standard disk Bay ④ 3.5", 1" high, no access, optional disk * Only for optional 6-in-1 media reader
Memory	2GB, 3GB, 4GB, or 6GB std, 8GB max ⁸ , dual-channel capable, PC3-10600 1333MHz DDR3 , non-parity, two 240-pin DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Slot 1: half-length,full-height, PCI Express x16 Ver 2.0 Slot 2: half-length,full-height, PCI Express x1 Ver 2.0 Slot 3: half-length,full-height, PCI Express x1 Ver 2.0 Slot 4: half-length,full-height, 32-bit PCI Ver 2.3
Graphics	ATI™ Radeon™ 3000 , integrated graphics in 760G, uses main memory, DirectX® 10, ATI Avivo™, one analog VGA DB-15 connector, one HDMI connector, HDCP-compliant	
SATA disk	500GB or 1TB , SATA 3.0Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710	
SATA DVD±RW	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	None	
EIDE cables	None	
Diskette drive	None	
Media reader	6-in-1 media reader	
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, HDMI)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, Realtek® ALC662 codec	
External speakers	None	
Internal speaker	None	
Ethernet	10/100 ethernet on planar, Realtek 8103EL	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	None	
Keyboard	104-key standard keyboard (PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	<i>Some:</i> 180 watts, universal, manual switch <i>Some:</i> 280 watts, universal, manual switch	
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Home Premium 64 Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live™ Essential• Microsoft Office 2010 preloaded; purchase product key to activate• CyberLink Power2Go (DVD±RW)• Lenovo Dynamic Brightness System*• Lenovo Eye Distance System** Only applicable for optional Lenovo L2362p monitors		
Limited Warranty ¹ <ul style="list-style-type: none">⇨ 1-year parts and labor⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)⇨ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇨ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686		




See footnotes for important warranty information
 US models announced January 12, 2011

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 (PGKR1-1) January 2011

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	Media reader	SATA disk	SATA optical	Graphics	TV tuner	Power supply	Win7 preload	Avail date
7723-1MU	4x4	Athlon II X2 260	3.20	2MB	2	2GBx1	6-in-1	500GB ²	DVD±RW	Radeon 3000	None	280W	Prem 64	Jul 11
7723-1NU	4x4	Athlon II X2 260	3.20	2MB	2	2GBx2	6-in-1	500GB	DVD±RW	Radeon 3000	None	280W	Prem 64	Jul 11
7723-1KU	4x4	Athlon II X4 650	3.20	2MB	4	4+2GB	6-in-1	1TB	DVD±RW	Radeon 3000	None	280W	Prem 64	Jul 11
7723-1LU	4x4	Athlon II X4 650	3.20	2MB	4	2GBx2	6-in-1	1TB	DVD±RW	Radeon 3000	None	280W	Prem 64	Jul 11
7723-2CU	4x4	Athlon II X2 260	3.20	2MB	2	2GBx2	6-in-1	1TB	DVD±RW	Radeon 3000	None	280W	Prem 64	Dec 11
7723-2DU	4x4	Athlon II X4 650	3.20	2MB	4	4+2GB	6-in-1	1.5TB	DVD±RW	Radeon 3000	None	280W	Prem 64	Dec 11

- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	AMD® Athlon™ II X2 Processor 260 with dual-core , 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) AMD Athlon II X4 Processor 650 with quad-core , 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3	Tower <ul style="list-style-type: none">• Black bezel with glossy finish• 6.9" W X 16.9" D X 14.5" H• 175mm W X 430mm D X 368mm H• 17.6 lb (8.0 kg), weight may vary by configuration Bay ① 5.25", 1.6" high, access, standard optical Bay ② N/A, N/A, N/A, media reader* Bay ③ 3.5", 1" high, no access, standard disk Bay ④ 3.5", 1" high, no access, optional disk * Only for optional 6-in-1 media reader
Implementation		Slot 1: half-length,full-height, PCI Express x16 Ver 2.0 Slot 2: half-length,full-height, PCI Express x1 Ver 2.0 Slot 3: half-length,full-height, PCI Express x1 Ver 2.0 Slot 4: half-length,full-height, 32-bit PCI Ver 2.3
Memory	8GB max ⁸ , dual-channel capable, PC3-10600 1333MHz DDR3 , non-parity, two 240-pin DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller	
Graphics	ATI™ Radeon™ 3000 , integrated graphics in 760G, uses main memory, DirectX® 10, ATI Avivo™, one analog VGA DB-15 connector, one HDMI connector, HDCP-compliant	
SATA disk	500GB, 1TB, or 1.5TB , SATA 3.0Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710	
SATA DVD±RW	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	None	
EIDE cables	None	
Diskette drive	None	
Media reader	6-in-1 media reader	
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, HDMI)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, Realtek® ALC662 codec	
External speakers	None	
Internal speaker	None	
Ethernet	10/100 ethernet on planar, Realtek 8103EL	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	None	
Keyboard	104-key standard keyboard (PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	280 watts, universal, manual switch	
Preloaded operating system ²⁰ <ul style="list-style-type: none">- Genuine Windows® 7 Home Premium 64 Preloaded applications ⁵ <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live™ Essential <ul style="list-style-type: none">• Microsoft Office 2010 preloaded; purchase product key to activate• CyberLink Power2Go (DVD±RW)• Lenovo Dynamic Brightness System*• Lenovo Eye Distance System** Only applicable for optional Lenovo L2362p monitors		 <div>Limited Warranty¹<ul style="list-style-type: none">⇒ 1-year parts and labor⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)⇒ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686</div>

See footnotes for important warranty information

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US models announced December 21, 2011; previous models on July 6, 2011


(PGKR1-2) December 2011

Lenovo® H420 (7752) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cache	Cores	Memory ^a	Media reader	SATA disk	SATA optical	Graphics	TV tuner	802.11 wireless	Power supply	Win7 preload
7752-1QU	4x4	Pentium G620	2.60	3MB	2	4GBx1	6-in-1	1TB ²	DVD±RW	Intel HD graphics	None		280W	Prem 64
7752-1RU	4x4	Pentium G620	2.60	3MB	2	4GBx1	6-in-1	500GB	DVD±RW	Intel HD graphics	None		280W	Prem 64
7752-1SU	4x4	i3-2100	3.10	3MB	2	4GBx1	6-in-1	1TB	DVD±RW	Intel HD graphics	None	11b/g/n	280W	Prem 64
7752-1TU	4x4	i3-2100	3.10	3MB	2	4+2GB	6-in-1	1TB	DVD±RW	Intel HD graphics	None	11b/g/n	280W	Prem 64
7752-2CU	4x4	i3-2120	3.30	3MB	2	2GBx2	6-in-1	1TB	DVD±RW	Intel HD graphics	None	11b/g/n	280W	Prem 64

- **Lenovo Rescue System provides OneKey recovery and OneKey Antivirus without booting into Windows**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Processor	Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.60 GHz, 3MB Cache) integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.10 GHz, 3MB Cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2120 Processor (2 cores / 4 threads, 3.30 GHz, 3MB Cache) , integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket	Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64 Preloaded applications⁵ <ul style="list-style-type: none">• Lenovo® Rescue System• Driver and Application Installation• McAfee® VirusScan® Plus (60 days of virus definitions)• Windows Live™ Essentials• Microsoft Office 2010 preloaded; purchase product key to activate• CyberLink Power2Go (DVD±RW)• Lenovo Dynamic Brightness System*• Lenovo Eye Distance System* <i>* Only applicable for optional Lenovo L2362p monitors</i>
Implementation		
Memory	8GB max ⁸ , dual-channel capable, PC3-10600 1333MHz DDR3* , non-parity, two 240-pin DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller	
Graphics	Intel HD Graphics , integrated graphics in processor, uses main memory, DirectX®10, one analog VGA DB-15 connector, one HDMI connector, HDCP-compliant (only for i3/i5/i7 models)	
SATA disk	500GB or 1TB , SATA 3.0Gb/s, 7200 rpm	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset	
SATA DVD±RW	Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors	
EIDE controller	None	
EIDE cables	None	
Diskette drive	None	
Media reader	6-in-1 media reader	
Chipset	Intel H61 Express Chipset	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, HDMI)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) audio, Realtek® ALC662 codec	
External speakers	None	
Internal speaker	None	
Wireless	<i>Some:</i> 11b/g/n wireless ⁴ , PCIe x1 adapter	
Ethernet	Gigabit ethernet on planar, Intel 82579LM	
Modem	None	
Security chip	None	
TV tuner	None	
Camera	None	
Keyboard	104-key standard keyboard (PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB connector), black	
Power supply	280 watts, universal, manual switch	
Mechanical	Tower <ul style="list-style-type: none">• Black bezel with glossy finish• 6.9" W X 16.9" D X 14.5" H• 175mm W X 430mm D X 368mm H• 17.6 lb (8.0 kg), weight may vary by configurationBay ① 5.25", 1.6" high, access, standard opticalBay ② N/A, N/A, N/A, media reader*Bay ③ 3.5", 1" high, no access, standard diskBay ④ 3.5", 1" high, no access, optional disk <i>* Only for optional 6-in-1 media reader</i> Slot 1: half-length,full-height, PCI Express x16 Ver 2.0 Slot 2: half-length,full-height, PCI Express x1 Ver 2.0* Slot 3: half-length,full-height, PCI Express x1 Ver 2.0 Slot 4: half-length,full-height, PCI Express x1 Ver 2.0 <i>* Wireless adapter in slot in some models</i>	Limited Warranty¹ <ul style="list-style-type: none">≈ 1-year parts and labor≈ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm)≈ Service upgrade options (in eligible locations):⁹<ul style="list-style-type: none">• 2-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1552)• 3-year Lenovo Onsite Repair 9x5 Next Business Day (78Y1553)≈ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

See footnotes for important warranty information

US model(s) announced December 21, 2011; previous models on July 6, 2011

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(PGKR2-1) December 2011

Partial list of Lenovo® Care Services²²
for Lenovo Essential desktops

For more information see:
http://www.lenovo.com/services_warranty/us/en/index.html

<u>Lenovo Care service upgrade options</u>	
<i>Lenovo Essential desktops with 1-year Onsite warranty</i>	
2-year Lenovo Onsite Repair warranty 9x5	78Y1552
3-year Lenovo Onsite Repair warranty 9x5	78Y1553

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

Footnotes:

- ¹ Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
- ² **Weight** includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
- ³ **Thinness** may vary at certain points on the system.
- ⁴ **Wireless capability:** Requires compatible wireless-enabled options sold separately.
- ⁵ **Post-warranty annual maintenance agreement:** Service begins at the end of the base warranty or the end of any other applied warranty and maintenance option, whichever occurs last. Service delivery is not available the same day the maintenance agreement is purchased. Maintenance agreements must be purchased and the registration successfully completed prior to the service being available.
- ⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
- ⁷ **Maximum memory capacity** may require the replacement of standard component with largest supported component available. On systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.
- ⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ⁹ **Service upgrade options:** 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.
- ¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2007 during testing. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- ¹¹ **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.
- ¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ¹³ **Onsite Repair:** If a machine is listed as having "On-site", this means that on-site service is available for the replacement of parts for warranty repairs. Certain parts, referred to as Customer Replaceable Unit ("CRU") parts, are easy to install and require little or no tools or technical knowledge. Some examples of CRU parts are mice, keyboards, hard disk drives, speakers, and memory. If your problem can be resolved with a CRU, the Support Center will offer to ship the part to you for you to install.
- ¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.
- ¹⁵ **Modem speeds:** Public network download 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.
- ¹⁶ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.
- ¹⁷ **International Warranty Service** is available for most products in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. Response times may vary and may exclude some holidays.
- ¹⁹ **Depot repair service:** In the United States call 1-877-453-6686. The customer may be asked certain diagnostic questions before a courier is sent. Your purchase includes this depot repair service, available in the U.S. during the limited warranty period.
- ²⁰ **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.
- ²¹ **For combination drives,** maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.
- ²² **Lenovo Care 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 can be express shipped to you for quick replacement. For 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 terms and conditions for complete details and restrictions.

²³ **Customer Replacement Units (CRUs)** are designed to be replaced by customers during the applicable warranty period. Lenovo will send a technician onsite to perform a repair if remote telephone diagnosis does not isolate the problem, if customer replaceable parts are unable to resolve the problem, or at the request of the customer. For a list of customer replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges.

²⁵ **Wireless WAN Cards:** Wireless data service requires separate agreement with Verizon Wireless. Verizon Wireless, not Lenovo, is solely responsible for service. Monthly and airtime charges may apply. Service may not be available in all areas; purchaser is responsible for verifying with Verizon Wireless that service is available for the intended location before the purchase of the card. For complete details, including service plans, additional required hardware or software, and service coverage, visit www.verizonwireless.com.

²⁸ **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.



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December 2011
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Personal Systems Reference Lenovo® Consumer Monitors

December 2011 - Version 411



Lenovo L2363d Wide Monitor

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<div>Name Case color Type-model Panel Viewable image size Max view area (W x H) Optimum resolution Max pixel rate Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness Contrast ratio Dynamic contrast ratio Pixel response time Color gamut Anti-reflective Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) Power supply Weight Limited warranty⁴ Available date</div> <div>L2062 Wide Flat Panel Monitor High gloss black with metal gray 1173-US1 TFT-LCD, twisted nematic (TN), white LED backlight 20.0" / 508mm (diagonal) 17.4" x 9.8" / 443mm x 249mm 1600x900 153 MHz 16:9 0.277mm 92 dpi 250 nits or cd/m² (typical) 1000:1 (typical) 5,000,000:1 5ms (typical) 72% Anti-reflective, anti-glare 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt adjustable stand Sides: 0.63" (16mm); 14.3" H x 18.9" W x 6.9" D; 362.5mm H x 480.0mm W x 174.8mm D 17 watts typical, 22 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply) 7.99 lb; 3.63 kg 1 year (includes backlight) May 2011</div>		<div>Features</div> <div><ul style="list-style-type: none">• Widescreen 20-inch monitor• View images in a 16x9 wide aspect ratio• High-bandwidth Digital Content Protection (HDCP)-compliant• Tilt and cable management stand• Compliance with ENERGY STAR 5.0• Mercury-free and Arsenic-free panel glass• Kensington® lock slot ready for enhanced security• Microsoft® Windows® 7 certified</div>
<div>VESA-compliant² Power management Ergonomics Emission standards Environmental</div> <div>VESA DDC2B/CI, VESA DPMS-compliant ENERGY STAR® 5.0 ISO 9241-307 FCC Class B TCO (TCO Displays 5.2), WEEE (EU Directive 2002/96/EC), RoHS (EU Directive 2002/95/EC)</div>		<div></div> <div>Lenovo L2062 Wide Monitor</div>
<div>Preset resolutions</div> <div>VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 WXGA: 1366x768 SXGA: 1280x1024 WXGA+: 1440 x 900, 1600x900</div>		
<div>Presets / user settings</div> <div>Standard presets: 24; user settings: 20</div>		
<div>Viewing adjustments Rotating screen On screen display Control features USB hub Multiple input Monitor connectors</div> <div>Tilt: 20° back, -5° forward; detachable stand None On screen display with digital user controls (8 languages) Direct access (control buttons on front) for automatic image setup None Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D) for digital attach [white], HDCP-compliant</div>		
<div>Signal cables Mounting features Security</div> <div>(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div>		
<div>Ship group</div> <div>Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, 1.8m power cord</div>		
<div>Limited Warranty</div> <div><ul style="list-style-type: none">⇒ 1 year limited warranty⁴⇒ Advanced Exchange Service at 1-877-453-6686⇒ Replacement normally arrives in five business days, excluding holidays⇒ Lenovo pays all shipping costs for valid warranty claims⁶⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>		<div>Accessories</div> <div><div>Kensington® MicroSaver® Cable Lock73P2582</div><div>Kensington Twin Head Cable Lock45K1620</div></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>More information at www.lenovo.com/support/monitors</div>


See footnotes for important warranty information
 US model announced April 19, 2011


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Name	L2262 Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 21.5-inch monitor with white LED backlight• View images in a 16x9 wide aspect ratio• High-bandwidth Digital Content Protection (HDCP)-compliant• Tilt and cable management stand• Compliance with ENERGY STAR 5.0• Touch sensitive control buttons can give user new comfortable experiences• Kensington® lock slot ready for enhanced security• Microsoft® Windows® 7 certified
Case color	High gloss black with metal gray	
Type-model	0560-US1	
Panel	TFT-LCD, twisted nematic (TN), white LED backlight	
Viewable image size	21.5" (546mm) diagonal	 <p>Lenovo L2262 Wide Monitor</p>
Max view area (W x H)	18.8" x 10.6" / 476.6mm x 268.1mm	
Optimum resolution	1920x1080	
Max pixel rate	VGA: 205MHz; DVI: 165MHz	
Aspect ratio	16:9	
Pixel pitch (mm)	.248mm	
Dot/Pixel per Inch	103 dpi	
Brightness	250 nits or cd/m ² (typical)	
Contrast ratio	1000:1 (typical)	
Dynamic contrast ratio	5,000,000:1	
Pixel response time	5ms (typical)	
Color gamut	72%	
Vertical frequency	50 to 76Hz	
Horizontal frequency	30 to 83kHz	
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical	
Stand	Tilt adjustable stand	
Bezel width	<i>Sides: 0.75" (19.0mm); top: 0.72" (18.2mm); bottom: 1.07" (27.3mm)</i>	
Dimensions (HxWxD)	15.08" H x 20.31" W x 7.07" D; 383mm H x 516mm W x 179.6mm D	
Power supply	23 watts typical, 27 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)	
Weight	9.13 lb; 4.14 kg	
Limited warranty ⁴	1 year (includes backlight)	
Available date	June 2011	
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant	
Power management	ENERGY STAR [®] 5.0	
Ergonomics	ISO 9241-307	
Emission standards	FCC Class B	
Environmental	TCO (TCO Displays 5.1), WEEE (EU DIRECTIVE 2002/96/EC), RoHS (EU DIRECTIVE 2002/95/EC)	
Preset resolutions	VGA: 640x350, 640x480 SVGA: 800x600, 832x624 XGA: 1024x768, XGA+: 1152x864 SXGA: 1280x1024 HD: 1366x768 WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080	
Presets / user settings	Standard presets: 26; user settings: 20	
Viewing adjustments	<i>Tilt: 20° back, -5° forward; detachable stand</i>	
Rotating screen	None	
On screen display	On screen display with digital user controls (8 languages)	
Control features	Direct access (touch sensitive buttons on front) for automatic image setup, dual input, brightness, and NOVO vision	
USB hub	None	
Camera	None	
Multiple input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)	
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D) for digital attach [white], HDCP-compliant	
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter	
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI [®] (100mm mount)	
Security	Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	
Ship group	Monitor, attached stand, Setup poster, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter black power cord	
Limited Warranty		Accessories
⇒ 1 year limited warranty⁴		Kensington® MicroSaver® Cable Lock 73P2582
⇒ Advanced Exchange Service at 1-877-453-6686		Kensington Twin Head Cable Lock 45K1620
⇒ Replacement normally arrives in five business days, excluding holidays		
⇒ Lenovo pays all shipping costs for valid warranty claims⁵		
⇒ 24x7[®] day toll-free support for warranty issues during the warranty period⁴		See details at www.lenovo.com/support/monitoraccessories
		More information at www.lenovo.com/support/monitors

See footnotes for important warranty information
US model announced May 31, 2011

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(L2262) July 2011


Name	LI2361d Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 23-inch monitor• 1080p full HD support, HDCP-compliant• Lenovo's 3D monitor, supports new FPR 3D technology (FPR: Film-type Patterned Retarder)• Built-in VGA, DVI and HDMI 1.4 connectors for attachment to three systems concurrently• Compliance with ENERGY STAR 5.1• Kensington® lock slot ready for enhanced security• Microsoft® Windows 7 certified				
Case color	High gloss black with metal gray					
Type-model	1192-US1					
Panel	TFT-LCD, twisted nematic (TN), white LED backlight					
Viewable image size	23.0" (584mm) diagonal					
Max view area (W x H)	20.04" x 11.28" / 509.2mm x 286.4mm					
Optimum resolution	1920x1080					
Max pixel rate	205MHz (VGA), 165MHz (HDMI/DVI)					
Aspect ratio	16:9					
Pixel pitch (mm)	.265mm					
Dot/Pixel per Inch	96 dpi					
Brightness	250 nits or cd/m² (typical)					
Contrast ratio	1000:1 (typical)					
Dynamic contrast ratio	10,000,000:1					
Pixel response time	5ms (typical)					
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical					
Stand	Tilt adjustable stand					
Bezel width	Sides: 0.74" (18.7mm)					
Dimensions (HxWxD)	16.18" H x 21.61" W x 7.47" D; 411.0mm H x 549.0mm W x 189.8mm D					
Power supply	40 watts typical, 45 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)					
Weight	11.0 lb; 5.0kg					
Limited warranty ⁴	1 year					
Available date	January 2012					
VESA-compliant ²	VESA DDC2B/CI, EDID 1.4A, VESA DPMS-compliant					
Power management	ENERGY STAR® 5.1					
Ergonomics	ISO 9241-307					
Emission standards	FCC Class B					
Environmental	WEEE (EU Directive 2002/96/EC), RoHS (EU Directive 2002/95/EC)					
Preset resolutions	VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1280x800, 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 WUXGA: 1920x1080					
Presets / user settings	Presets: 26 (VGA), 24 (HDMI); user settings: 20					
Viewing adjustments	<i>Tilt:</i> 20° back, -5° forward					
Rotating screen	None					
On screen display	On screen display with digital user controls (8 languages)					
Control features	Direct access (control buttons on front) for automatic image setup and adjustment for brightness					
Multiple input	Triple input (three different PCs attach to three different connectors; one PC shows image; select via button)					
Monitor connectors	(1) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant (2) HDMI (1.4), digital, black, HDCP-compliant (3) VGA 15-pin D-shell, analog, blue					
Signal cables	detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter					
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)					
Security	Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)					
Ship group	Monitor, attached Stand and Base, 3D glasses, 3D poster, Monitor shopping bag, Warranty information, 1 CD with multilingual User's Guide, quick setup guide and monitor installation files, 1.8 meter analog signal cable, 1.8 meter black power cord					
Limited Warranty <ul style="list-style-type: none">⇒ 1 year limited warranty⁴⇒ Advanced Exchange Service at 1-877-453-6686⇒ Replacement normally arrives in five business days, excluding holidays⇒ Lenovo pays all shipping costs for valid warranty claims⁶⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴		Accessories <table><tr><td>Kensington MicroSaver® Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr></table> <p>See details at www.lenovo.com/support/monitoraccessories</p> <p>See all monitors at www.lenovo.com/support/monitors</p>	Kensington MicroSaver® Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
Kensington MicroSaver® Cable Lock	73P2582					
Kensington Twin Head Cable Lock	45K1620					

Name	L2362p Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 23-inch monitor with white LED backlight• View images in a 16x9 wide aspect ratio• 1080p full HD support, HDCP-compliant• Tilt, swivel, and cable management stand• Compliance with ENERGY STAR 5.0• Integrated camera (0.3 megapixel) and digital microphone• Internal speaker (3 watts x 2) on bottom• Integrated USB 2.0 Hub (1 port into PC, 4 ports for accessories)• Touch sensitive control buttons can give user new comfortable experiences• Kensington® lock slot ready for enhanced security• Microsoft® Windows® 7 certified
Case color	High gloss black with metal gray	
Type-model	0559-US1	
Panel	TFT-LCD, twisted nematic (TN), white LED backlight	
Viewable image size	23.0" (584mm) diagonal	
Max view area (W x H)	20.0" x 11.3" / 509.2mm x 286.4mm	
Optimum resolution	1920x1080	
Max pixel rate	VGA: 205MHz; HDMI: 165MHz	
Aspect ratio	16:9	
Pixel pitch (mm)	.265mm	
Dot/Pixel per Inch	96 dpi	
Brightness	250 nits or cd/m ² (typical)	
Contrast ratio	1000:1 (typical)	
Dynamic contrast ratio	5,000,000:1	
Pixel response time	5ms (typical)	
Color gamut	72%	
Vertical frequency	50 to 75Hz	
Horizontal frequency	30 to 83kHz	
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical	
Stand	Tilt and swivel adjustable stand	
Bezel width	Sides: 0.74" (18.7mm); top: 1.05" (26.7mm); bottom: 1.06" (26.8mm)	
Dimensions (HxWxD)	16.18" H x 21.61" W x 7.47" D; 411mm H x 549mm W x 189.8mm D	
Power supply	40 watts typical, 45 watts maximum, <1 watts standby/suspend, universal, integrated (no external brick-like power supply)	
Weight	11.79 lb; 5.35 kg	
Limited warranty ⁴	1 year (includes backlight)	
Available date	July 2011	
VESA-compliant ²	VESA DDC2B/CI, VESA DPMS-compliant	
Power management	ENERGY STAR ^{®3} 5.0	
Ergonomics	ISO 9241-307	
Emission standards	FCC Class B	
Environmental	TCO (TCO Displays 5.1), WEEE (EU DIRECTIVE 2002/96/EC), RoHS (EU DIRECTIVE 2002/95/EC)	
Preset resolutions (VGA)	VGA: 640x480 SVGA: 800x600 XGA: 1024x768 XGA+: 1152x864 SXGA: 1280x1024 HD: 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 Full HD: 1920x1080	
Presets / user settings	Standard presets: VGA: 26; HDMI: 24; user settings: 20	
Viewing adjustments	Tilt: 20° back, -5° forward; swivel: +/-150°; detachable stand	
Rotating screen	None	
On screen display	On screen display with digital user controls (8 languages)	
Control features	Direct access (touch sensitive buttons on front) for volume up/down, mute, automatic image setup, dual input, brightness, and NOVO vision	
USB hub	USB 2.0 Hub (1 port into PC, 4 ports for accessories)	
Camera	Integrated camera (0.3 megapixel) and digital microphone	
Speaker	Internal speaker (3 watts x 2) on bottom, audio in jack (3.5mm) and audio out jack (3.5mm) on rear	
Multiple input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)	
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) HDMI (1.3), digital, black, HDCP-compliant	
Signal cables	(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, HDMI at each end, digital, 1.8 meter	
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)	
Security	Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)	
Ship group	Monitor, attached stand, Setup poster, Warranty Information, CD with multilingual User's Guide and monitor installation files, clean cloth, 1.8 meter analog signal cable, 1.8 meter HDMI cable, 1.8 meter USB cable, 1.8 meter power cord, 1.8 meter audio cable	
Limited Warranty		
➤ 1 year limited warranty⁴		
➤ Advanced Exchange Service at 1-877-453-6686		
➤ Replacement normally arrives in five business days, excluding holidays		
➤ Lenovo pays all shipping costs for valid warranty claims⁶		
➤ 24x7[®] day toll-free support for warranty issues during the warranty period⁴		
Accessories		
Kensington® MicroSaver® Cable Lock		73P2582
Kensington Twin Head Cable Lock		45K1620
See details at www.lenovo.com/support/monitoraccessories		
More information at www.lenovo.com/support/monitors		

<div>NameL2363d Wide Flat Panel Monitor</div> <div>Case colorHigh gloss black with metal gray</div> <div>Type-model4452-US1</div> <div>PanelTFT-LCD, twisted nematic (TN), CCFL backlight</div> <div>Viewable image size23.0" (584mm) diagonal</div> <div>Max view area (W x H)20.04" x 11.28" / 509.2mm x 286.4mm</div> <div>Optimum resolution1920x1080</div> <div>Max pixel rate290MHz (DVI), 165MHz (HDMI)</div> <div>Aspect ratio16:9</div> <div>Pixel pitch (mm).265mm</div> <div>Dot/Pixel per Inch96 dpi</div> <div>Brightness400 nits or cd/m² (typical)</div> <div>Contrast ratio1000:1 (typical)</div> <div>Dynamic contrast ratio20000:1</div> <div>Pixel response time5ms (typical)</div> <div>Anti-reflectiveAnti-reflective, anti-glare</div> <div>Viewing angle at 10:1 CR170° (+/- 85°) horizontal, 160° (+/- 80°) vertical</div> <div>StandTilt adjustable stand</div> <div>Bezel widthSides: 1.13" (28.7mm)</div> <div>Dimensions (HxWxD)16.69" H x 22.40" W x 6.57" D; 423.8mm H x 569.0mm W x 167.0mm D</div> <div>Power supply55 watts typical, 60 watts maximum, <2 watts standby/suspend, universal, integrated (no external brick-like power supply)</div> <div>Weight13.2 lb; 6.0kg</div> <div>Limited warranty⁴1 year (includes backlight)</div> <div>Available dateApril 2011</div>		<div>Features</div> <div><ul style="list-style-type: none">• Widescreen 23-inch monitor• 1080p full HD support, HDCP-compliant• Lenovo's first 3D monitor, supports NVIDIA® 3D Vision™ (requires selected NVIDIA graphics card configurations)• Supports 120Hz refresh rate• Integrated 3D Web Camera to record 3D images• Built-in DVI and HDMI 1.3 connectors for attachment to two systems concurrently• 10-60 degree easily adjustable stand and VESA mount• Compliance with ENERGY STAR 5.0• Arsenic free glass• Kensington® lock slot ready for enhanced security• Microsoft® Windows 7 certified</div>
<div>VESA-compliant²VESA DDC2B/CI, EDID 1.3, VESA DPMS-compliant</div> <div>Power managementENERGY STAR®³ 5.0</div> <div>ErgonomicsISO 9241-307</div> <div>Emission standardsFCC Class B</div> <div>EnvironmentalWEEE (EU Directive 2002/96/EC), RoHS (EU Directive 2002/95/EC)</div> <div>Preset resolutionsVGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 WUXGA: 1920x1080 (support 120Hz refresh rate for 3D display mode)</div> <div>Presets / user settingsPresets: 29 (DVI), 24 (HDMI); user settings: 20</div>		<div></div> <div>L2363d Wide Monitor</div>
<div>Viewing adjustmentsTilt: 10°-60° back, 0° forward; adjustable stand</div> <div>Rotating screenNone</div> <div>On screen displayOn screen display with digital user controls (8 languages)</div> <div>Control featuresDirect access (control buttons on front) for automatic image setup and adjustment for brightness</div> <div>USB hubUSB 2.0 Hub (1 port into PC, 3 ports for accessories)</div> <div>Camera moduleIntegrated camera (3D, 0.3 megapixel) and dual array microphone</div> <div>3D Vision kitNVIDIA 3D Vision kit includes GeForce 3D Vision active shutter glasses, 3D Vision USB controller/IR emitter</div> <div>Multiple inputDual input (two different PCs attach to two different connectors; one PC shows image; select via button)</div> <div>Monitor connectors(1) Digital Visual Interface (DVI-D), digital, white, HDCP-compliant (2) HDMI (1.3), digital, black, HDCP-compliant</div> <div>Signal cables(1) detachable, dual-link DVI-D at each end, digital, 1.8 meter (2) detachable, HDMI at each end, digital, 1.8 meter</div> <div>Mounting featuresWall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI® (100mm mount)</div> <div>SecuritySecurity keyhole for attachment of optional cable lock (Kensington® lock-compatible)</div> <div>Ship groupMonitor, attached stand, cable cover, Setup poster, Health and Safety Information and 3D Camera Setup Guide, 2 CDs with multilingual User's Guide, quick setup guide and monitor installation files, NVIDIA 3D vision kit, 1.8 meter dual-link DVI-D cable, 1.8 meter HDMI cable, 1.8 meter USB cable, 1.8 meter black power cord</div>		
<div>Limited Warranty</div> <div>⇒ 1 year limited warranty⁴</div> <div>⇒ Rapid Replacement Service at 1-877-453-6686</div> <div>⇒ Replacement normally arrives in two business days, excluding holidays</div> <div>⇒ Lenovo pays all shipping costs for valid warranty claims⁶</div> <div>⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴</div>		<div>Accessories</div> <div><div>Kensington MicroSaver® Cable Lock73P2582</div><div>Kensington Twin Head Cable Lock45K1620</div></div> <div>See details at www.lenovo.com/support/monitoraccessories</div> <div>See all monitors at www.lenovo.com/support/monitors</div>

 See footnotes for important warranty information
US model announced March 22, 2011

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(L2363d) April 2011

Name	L2364 Wide Flat Panel Monitor	Features <ul style="list-style-type: none">• Widescreen 23-inch monitor with white LED backlight• View images in a 16x9 wide aspect ratio• Built-in VGA, DVI-D, and HDMI 1.3 connectors• 1080p full HD support, HDCP-compliant• Tilt and cable management stand• Compliance with ENERGY STAR 5.0• Mercury free panel• Kensington® lock slot ready for enhanced security• Microsoft® Windows® 7 certified				
Case color	High gloss black with metal gray					
Type-model	1187-US1					
Panel	TFT-LCD, twisted nematic (TN), white LED backlight					
Viewable image size	23.0" (584mm) diagonal					
Max view area (W x H)	20.0" x 11.3" / 509.2mm x 286.4mm					
Optimum resolution	1920x1080					
Max pixel rate	VGA: 205MHz; HDMI/DVI: 165MHz					
Aspect ratio	16:9					
Pixel pitch (mm)	.265mm					
Dot/Pixel per Inch	96 dpi					
Brightness	250 nits or cd/m² (typical)					
Contrast ratio	1000:1 (typical)					
Dynamic contrast ratio	5,000,000:1					
Pixel response time	5ms (typical)					
Color gamut	72%					
Vertical frequency	50 to 75Hz					
Horizontal frequency	30 to 83kHz					
Viewing angle at 10:1 CR	170° (+/- 85°) horizontal, 160° (+/- 80°) vertical					
Stand	Tilt adjustable stand					
Bezel width	<i>Sides: 0.71" (18.0mm); top: 0.71" (18.0mm); bottom: 0.89" (22.5mm)</i>					
Dimensions (HxWxD)	15.90" H x 21.57" W x 7.20" D; 403.9mm H x 547.8mm W x 183mm D					
Power supply	30 watts typical, 35 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)					
Weight	7.28 lb; 3.30 kg					
Limited warranty ⁴	1 year (includes backlight)					
Available date	July 2011					
VESA-compliant ²	VESA DDC2B/CI, EDID 1.4A, VESA DPMS-compliant					
Power management	ENERGY STAR ^{®3} 5.0					
Ergonomics	ISO 9241-307					
Emission standards	FCC Class B					
Environmental	TCO (TCO Displays 5.2), WEEE (EU DIRECTIVE 2002/96/EC), RoHS (EU DIRECTIVE 2002/95/EC)					
Preset resolutions (VGA)	VGA: 640x350, 640x480, 720x400 SVGA: 800x600, 832x624 XGA: 1024x768 XGA+: 1152x864 WXGA: 1280x768, 1280x800 SXGA: 1280x1024 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 Full HD: 1920x1080					
Presets / user settings	Standard presets: VGA: 29; HDMI: 26; user settings: 20					
Viewing adjustments	<i>Tilt: 20° back, -5° forward; detachable stand</i>					
Rotating screen	None					
On screen display	On screen display with digital user controls (8 languages)					
Control features	Direct access (buttons at the middle bottom of the front bezel) for volume up/down, mute, automatic image setup, dual input, brightness, and NOVO vision					
USB hub	None					
Multimedia	Audio in jack (3.5mm) and audio out jack (3.5mm) on rear					
Multiple input	Triple input (three different PCs attach to three different connectors; one PC shows image; select via button)					
Monitor connectors	(1) VGA 15-pin D-shell, analog, blue (2) HDMI (1.3), digital, black, HDCP-compliant (3) Digital Visual Interface (DVI-D) for digital attach [white], HDCP-compliant					
Signal cable	Detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter					
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPI [®] (100mm mount)					
Security	Security keyhole for attachment of optional cable lock (Kensington [®] lock-compatible)					
Ship group	Monitor, attached stand, base, Setup poster, Warranty Information, CD with multilingual User's Guide and monitor installation files, shopping bag, 1.8 meter analog signal cable, 1.8 meter power cord					
Limited Warranty <ul style="list-style-type: none">⇒ 1 year limited warranty⁴⇒ Advanced Exchange Service at 1-877-453-6686⇒ Replacement normally arrives in five business days, excluding holidays⇒ Lenovo pays all shipping costs for valid warranty claims⁵⇒ 24x7⁶ day toll-free support for warranty issues during the warranty period⁴		Accessories <table><tr><td>Kensington[®] MicroSaver[®] Cable Lock</td><td>73P2582</td></tr><tr><td>Kensington Twin Head Cable Lock</td><td>45K1620</td></tr></table> <p>See details at www.lenovo.com/support/monitoraccessories More information at www.lenovo.com/support/monitors</p>	Kensington [®] MicroSaver [®] Cable Lock	73P2582	Kensington Twin Head Cable Lock	45K1620
Kensington [®] MicroSaver [®] Cable Lock	73P2582					
Kensington Twin Head Cable Lock	45K1620					

See footnotes for important warranty information
 US model announced June 28, 2011

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Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

- ¹ **ISO-compliant:** Compliance with ISO 9241 Part 3, ISO Part 7, ISO Part 8, and/or ISO 13406 Part 2 is dependent on a complete ISO-capable platform of a system unit, monitor, video subsystem, operating system and fonts.
- ² **VESA:** Requires attachment to suitably configured system with similarly enabled operating system.
- ³ **ENERGY STAR:** As an ENERGY STAR partner, Lenovo has determined that this product meets the ENERGY STAR 4.0 or 4.1 guidelines for energy efficiency. Requires attachment to suitably configured system.
- ⁴ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ⁶ **Lenovo pays all shipping costs** for warranty repairs during limited warranty period.
- ⁸ **Telephone support** may be subject to additional charges, even during the limited warranty period. In the United States call 877-453-6686. Response times may vary. May exclude some holidays.



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