

Personal Systems Reference Lenovo IdeaCentre Desktops

January 2009 - Version 350



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

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


- **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**
- **(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® 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
Implementation	Processor in FC-LGA6 package in LGA775 socket	<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
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max⁵, 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	
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 system²⁰	<ul style="list-style-type: none"> - <i>Some:</i> Microsoft® Windows® Vista® Home Basic Edition (32-bit) - <i>Some:</i> Microsoft Windows Vista Home Premium Edition (32-bit) ◇ 57-076245: Vista Basic logo ◇ <i>Others:</i> 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™ Facial Recognition™ • Corel® WinDVD® (DVD±RW) • CyberLink Power2Go (DVD±RW) 	
		Available at these retailers <ul style="list-style-type: none"> • B&H™ • J&R™ • Newegg® • TigerDirect • ASI Computer Systems
		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 (43R8882) ⇨ 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

Part number	Slot x bay	Processor	L2 cache	GHz	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


- **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**
- **(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	<p>Intel® Core™ 2 Duo Processor E4600 with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache or</p> <p>Intel Core 2 Duo Processor E7200 with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB L2 cache or</p> <p>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</p> <p>Processor in FC-LGA6 package in LGA775 socket</p>	<p>Tower</p> <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		<p>Bay ① 5.25", 1.6" high, access, standard optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.0", 1" high, access, 16-in-1 media reader</p> <p>Bay ④ 3.5", 1" high, no access, standard disk</p> <p>Bay ⑤ 3.5", 1" high, no access, optional disk</p>
Memory	<p>3GB or 4GB std, 4GB max⁸, PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 240-pin DIMM sockets</p> <p><i>Italics:</i> standard memory in both sockets; no sockets available</p>	
Graphics	<p><i>Some:</i> Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in G31, uses main memory, one 15-pin analog D-sub connector</p> <p><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</p> <p><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</p>	<p>Slot 1: half-length, full-height, PCI Express x1 Ver 1.1</p> <p>Slot 2: half-length, full-height, PCI Express x16 Ver 1.1**</p> <p>Slot 3: half-length, full-height, 32-bit PCI Ver 2.3 *</p> <p>Slot 4: half-length, full-height, 32-bit PCI Ver 2.3</p> <p>* modem in slot</p> <p>** used in some models</p>
SATA disk	<p>500GB, SATA 3.0Gb/s, 7200 rpm</p> <p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH</p>	
SATA controller	<p><i>Some:</i> Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>	
SATA DVD±RW	<p><i>Some:</i> Blu-ray Disc reader (no Blu-ray media burning), supports HD-DVD playback, DVD and CD recordable</p>	
SATA Blu-ray™		
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	<p>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</p>	
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	
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	<p>- Microsoft® Windows® Vista® Home Premium Edition (32-bit)</p> <p>↳ Vista Premium logo</p>	<p>Limited Warranty¹</p> <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 (43R8882) ↳ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686
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™ Facial Recognition™ • Corel® WinDVD® (DVD±RW, Blu-ray) • CyberLink Power2Go (DVD±RW, Blu-ray) 	

See footnotes for important warranty information
 57 US models announced July 15, 2008; previous models on May 12, 2008

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

- **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**
- **(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® 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	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 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 system²⁰	<ul style="list-style-type: none"> - <i>Some</i>: Microsoft® Windows® Vista® Home Basic Edition (32-bit) - <i>Some</i>: Microsoft Windows Vista Home Premium Edition (32-bit) ◇ 5313-3AU/3BU: Vista Basic logo ◇ <i>Others</i>: 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™ Facial Recognition™ • Corel® WinDVD® (DVD, DVD±RW) • CyberLink Power2Go (DVD, DVD±RW)
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 (43R8882) ⇨ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686 		

See footnotes for important warranty information

ES® US models announced November 12, 2008; previous models on July 15 or October 22, 2008

	Slot x Type-model bay	Processor	L2 GHz cache	Cores	Memory ⁸	Media reader	SATA disk	SATA optical	Graphics	Modem	Monitor	Cam- era	Vista preload	Avail date
ES*	5313-1FU 4x5	Core 2 Duo E7200	2.53 3MB	2	4GB	16-in-1	640GB ²	DVD±RW	GMA 3100	None	None	None	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	Cam	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	Cam	Home Prem	Jul 08
ES*	5313-2FU 4x5	Core 2 Quad Q6600	2.40 8MB	4	4GB	16-in-1	1TB	Blu-ray	9300 GE	None	None	None	Home Prem	Oct 08

- **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**
- **(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	Processor 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	4GB std, 4GB max⁹, 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		<ul style="list-style-type: none"> 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 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		<ul style="list-style-type: none"> 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
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		
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		
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 - Microsoft® Windows® Vista® Home Premium Edition (32-bit) ♦ 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™ Facial Recognition™ • Corel® WinDVD® (DVD±RW, Blu-ray) • CyberLink Power2Go (DVD±RW, Blu-ray) 	
		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 (43R8882) ↪ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686 	

See footnotes for important warranty information
 ES* US models announced October 22, 2008; previous models on July 15, 2008

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		
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	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 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	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
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), <i>1BU/2CU/2DU:</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)	
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 - Microsoft® Windows® Vista® Home Premium Edition (64-bit)	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 • Circuit City®
		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 (43R8882) ↪ 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 13, 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
5359-5AU	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® Dual-Core 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 Processor in FC-LGA6 package in LGA775 socket	Tower • 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	4GB, 5GB, 6GB, or 8GB std , 8GB max ⁹ , 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	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 controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DH	* Wireless adapter or TV tuner in slot in some models ** used in some models
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 system²⁰	- Microsoft® Windows® Vista® Home Premium Edition (64-bit) ◇ <i>5359-4DU/5AU</i> : Vista Premium logo ◇ <i>Others</i> : Vista Basic logo	
Preloaded applications⁵	• 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
- Circuit City®
- 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 (43R8882)
- ⇒ **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 13, 2009

**Partial list of accessories supported on:
IdeaCentre K210, K220, and K230****Storage and removable storage**

USB 2.0 MyKey E10 Flash Drive 1GB	45J7701	ann 04/29/08
USB 2.0 MyKey E10 Flash Drive 2GB	45J7702	ann 04/29/08
USB 2.0 MyKey E10 Flash Drive 4GB	45J7703	ann 04/29/08
USB 2.0 MiniKey M10D1 Flash 2GB (gray)	45J7752	ann 05/20/08
USB 2.0 MiniKey M10D2 Flash 2GB (black)	45J7754	ann 05/20/08
USB 2.0 MiniKey M10E1 Flash 2GB (teal)	45J7756	ann 05/20/08
USB 2.0 MiniKey M10E2 Flash 2GB (pink)	45J7758	ann 05/20/08
USB 2.0 Essential Memory Key 4GB	45J7904	ann 06/24/08
USB 2.0 Essential Memory Key 8GB	45J7905	ann 07/15/08
USB 2.0 Essential Memory Key 32GB	45K1258	ann 10/28/08
USB 2.0 Security Memory Key 1GB	41U5118	ann 07/17/07
USB 2.0 Security Memory Key 2GB	41U5119	ann 07/17/07
USB 2.0 Security Memory Key 4GB	41U5120	ann 07/17/07
USB 2.0 DataSlim E16 Portable HD 160GB	45J7700	ann 04/29/08
USB 2.0 Portable 160GB Hard Disk	43R1784	ann 09/23/08
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	ann 11/18/08
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
Wireless Kybd & Opt Wheel Mouse (via USB)	73P4067	ann 12/07/04
USB Keyboard with UltraNav	31P8950	ann 01/28/03
USB Travel Keyboard with UltraNav	31P9490	ann 04/27/04

Mouse

Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	ann 01/23/07
IdeaPad Mini Optical Mouse M10 (black)	47J7729	ann 06/17/08
IdeaPad Mini Optical Mouse M10A (black)	45J7730	ann 07/15/08
Lenovo Mini Optical Mouse M30 (black)	47J7735	ann 06/17/08
Lenovo Mini Optical Mouse M30 (white)	47J7736	ann 06/17/08
Lenovo Mini Optical Mouse M30 (red)	47J7737	ann 06/17/08
Lenovo Mini Optical Mouse M30 (blue)	47J7738	ann 06/17/08
Mini Wireless Laser Mouse N10 (black)	45J7731	ann 06/17/08
Mini Wireless Laser Mouse N10 (red)	45J7732	ann 06/17/08

Monitors

ThinkVision® L174 17" Monitor	9227AE1	ann 04/15/08
ThinkVision L1700p 17" Monitor	9417HE2	ann 09/17/08
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1940p Wide 19" Monitor	4424HB6	ann 09/17/08
ThinkVision L200p Wide 20.1" Monitor	4438HB6	ann 04/15/08
ThinkVision L2240p Wide 22" Monitor	4422HB6	ann 09/17/08
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08
ThinkVision L2440x Wide 24" Monitor	4421HB2	ann 09/17/08

Monitor Accessories⁴⁶

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar (L1900p, 24" Wide)	45K1263	ann 09/16/08
Kensington Cable Lock from Lenovo	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
ThinkPad Convertible Monitor Stand	40Y7620	ann 01/05/06
Radial Arm	19K4464	ann 05/05/00

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

Lenovo L195 Wide 19" LCD Monitor	4418HC1	ann 09/02/08
Lenovo L222 Wide 22" LCD Monitor	4432HF1	ann 09/02/08

Other accessories at www.lenovo.com/accessoriesAccessories 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 **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.
- 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.

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.



This publication was developed for products and services offered in the United States. Lenovo may not offer the products, services or features discussed in this document in other countries. Lenovo may withdraw an offering at any time. Information is subject to change without notice. Consult your local representative for information on offerings available in your area.

Lenovo reserves the right to change specifications and other product information at any time without prior notice. Lenovo is not responsible for photographic or typographical errors. **LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions; therefore this disclaimer may not apply to you.

Trademarks: Lenovo, the Lenovo logo, New World. New Thinking., Access Connections, Rescue and Recovery, ThinkVantage, and ThinkVision are trademarks of Lenovo. Microsoft, Windows, and Vista are registered trademarks of Microsoft Corporation. Intel, the Intel logo, Intel Inside logo, Intel Core and Core Inside are trademarks of Intel Corporation in the US and other countries. AMD, the AMD logo, AMD Athlon, AMD Sempron, and combinations thereof, are trademarks of Advanced Micro Devices, Inc. PCI Express is a trademark of PCI-SIG. Other company, product, or service names may be trademarks or service marks of others.

Visit www.lenovo.com/safecomputing periodically for the latest information on safe and effective computing.

Visit www.lenovo.com/psref for the latest version of Personal Systems Reference.

© Lenovo, 2009.
All rights reserved.

Lenovo
1009 Think Place
Morrisville, NC 27560
U.S.A.

January 2009
icbook.pdf