

# Personal Systems Reference Lenovo IdeaCentre Desktops

January 2009 - Version 350



Part number	Slot x bay	Processor	GHz	L2 cache (	Cores I	Memory	Media		SATA optical	Graphics	Modem	Monitor	Camera	Vista preload	Avail date
57-078915 57-078894 57-076245 57-076162 57-076161 57-076522	4x5 4x5 4x5 4x5	Celeron E1200 Pentium E2140 Pentium E2180 Pentium E2180 Pentium E2180 Pentium E2180	1.60 2.00 2.00 2.00	512KB 1MB 1MB 1MB 1MB 1MB	2 2 2 2 2 2	4GB 1GB 2GB 3GB	16-in-1 16-in-1 16-in-1 16-in-1	500GB 320GB 320GB 500GB	DVD±RW DVD±RW DVD±RW DVD±RW	GMA 3100 GMA 3100 GMA 3100 GMA 3100 GMA 3100 GMA 3100	Mod Mod Mod Mod	L222	Camera Camera	Home Prem Home Basic Home Prem Home Prem Home Prem	May 08 May 08 May 08 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  Implementation	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 Processor in FC-LGA6 package in LGA775 socket	• 180mm W > • 21.5 lb (9.7) • Toolless cov	′.0" D X 15.0" H < 432mm D X 380mm H 5 kg)			
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 240-pin DIMM sockets Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; 1 socket available	Toolless adapter retention  Sts le; Bay ① 5.25", 1.6" high, access, Bay ② 5.25", 1.6" high, access, open				
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in G31, uses main memory, one 15-pin analog D-sub connector	Bay @ 3.5", Bay 5 3.5",	1" high, no access, standard disk no access, optional disk			
SATA disk SATA controller SATA DVD±RW SATA cables EIDE controller EIDE cables Diskette drive	320GB or 500GB, SATA 3.0Gb/s, 7200 rpm Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors One None None	Slot 2: half-le Slot 3: half-le Slot 4: half-le	ngth,full-height, PCI Express x1 Ver 1.1 ngth,full-height, PCI Express x16 Ver 1.1 ngth,full-height, 32-bit PCI Ver 2.3 * ngth,full-height, 32-bit PCI Ver 2.3 slot in some models  Lenovo L222 Wide			
Media reader Chipset	16-in-1 media reader, internal USB 2.0  Intel G31 Express Chipset; I/O Controller Hub 7 Digital Home (ICH SATA 3.0Gb/s, PCI Express® x1, PCI 2.3, USB, LPC bus / Winbond® Super I/O for serial, parallel, keyboard, mouse functions		Widescreen 22-inch flat panel monitor     Active Matrix TFT LCD screen     Supports WSXGA+ 1680x1050 resolution     16:10 aspect ratio			
Front ports Rear ports Rear audio ports Audio External speakers Internal speaker Ethernet Modem Security chip	None 10/100 ethernet on planar, Intel 82562GZ (PHY/MAC) Some: 56K <sup>10</sup> V.92 data/fax soft modem, PCI adapter None	•	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			
TV tuner Camera	None Some: Lenovo Bright Eye camera, 0.3-megapixel, fixed focus		Soundbar with speakers included  Lenovo L222 Wide Monitor is only bun			
Keyboard Mouse Power supply	104-key antibacterial keyboard (PS/2 connector) Optical Wheel Mouse (USB connector), 400 dpi 280 watts, universal, manual switch		with some models			
Preloaded open: - Some: Micros Home - Some: Micros Home \$ 57-076245: Vis	ating system <sup>20</sup> oft® Windows® Vista® Basic Edition (32-bit) oft Windows Vista Premium Edition (32-bit)  Preloaded applications⁵ • Lenovo™ OneKey Recovery • Lenovo Healthcare Software • Lenovo Media Studio • Driver and Application Installation	•	Available at these retailers  ■ B&H™  ■ J&R™  ■ Newegg®  ■ TigerDirect  ■ ASI Computer Systems  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  ■ 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			

IdeaCentre™ K210 Personal Systems Reference (PSREF)

	Slot x		L2		Mad:-	CATA	CATA				Corr	Viete	A!!
Part number	bay	Processor	GHz cache (	cores Memory		disk	SATA optical	Graphics		Monito		Vista preload	Avail date
57-082791 57-076158 57-076244	4x5 Co 4x5 Co 4x5 Co	ore 2 Duo E4600 ore 2 Duo E7200 ore 2 Quad Q660 ore 2 Quad Q660 ore 2 Quad Q660	2.53 3MB 0 2.40 8MB 0 2.40 8MB 0 2.40 8MB	4 3GB 4 3GB 4 4GB	16-in-1 16-in-1 16-in-1 16-in-1	500GB 500GB 500GB 500GB	DVD±RW DVD±RW Blu-ray DVD±RW	/ GMA 3100 / GMA 3100 / GMA 3100 HD 2600 PR / 9300 GE	Mod	None None None	Cam None None Cam	Home Prem Home Prem Home Prem Home Prem Home Prem	Aug 08 May 08 May 08
		<ul> <li>(Select model</li> </ul>	ue System pro ls) Healthcare nonitor brightr	vides OneKe eyesight pro ness based o ght Eye came	y recove tection s n enviro era and \	ery and ( software nment	OneKey A detect dis	ntivirus withou stance betwee	ıt bootin n user aı	g into W nd moni	indow/ tor		
Processor		Intel® Core™ 2 Intel 64 Technole 800MHz system Intel Core 2 Du Intel 64 Technole 1066MHz system Intel Core 2 Qu (dual-core on du Virtualization Te 1066MHz system	ogy, Execute D bus, and 2ME o Processor I ogy, Execute D m bus, and 3M ad Processor Ial-die), Intel 6 chnology, Exe	Disable Bit, E B L2 cache or E7200 with d Disable Bit, E IB L2 cache or Q6600 with 4 Technology cute Disable	IST, r ual-core IST, or quad-ce	e, ore		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  Bay ① 5.25", 1.6" high, access, standard optical					
Implement Memory	ation	Processor in FC-LGA6 package in LGA775 socket  3GB or 4GB std, 4GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 240-pin DIMM sockets  Bay ② 5 Bay ② 6								n, acces acces no ac	s, o s, cess, s	open 16-in-1 media standard disk optional disk	reader
Graphics		Some: Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in G31, uses main memory, one 15-pin analog D-sub connector  Some: 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  NVIDIA® GeForce® 9300 GE, PCI Express x16, 256MB memory, DirectX® 10, TurboCache, PureVideo™ HD technology, S-video out, VGA connector,							half-length, full-height, PCI Express x1 Ver 1.1 half-length, full-height, PCI Express x16 Ver 1.1* half-length, full-height, 32-bit PCI Ver 2.3 * half-length, full-height, 32-bit PCI Ver 2.3 em in slot I in some models				
SATA disk SATA control SATA DVD SATA Blu-r SATA cable EIDE control EIDE cable Diskette dr Media read	±RW ray™ es roller es rive	500GB, SATA 3.0Gb/s, 7200 rpm Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH Some: Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Some: Blu-ray Disc reader (no Blu-ray media burning), supports HD-DVD playback, DVD and CD recordable Two SATA cables (each 1-drop to device), four SATA connectors One None None 16-in-1 media reader, internal USB 2.0											
Chipset		Intel G31 Expre	ess Chipset; I/ El Express® x1	O Controller, PCI 2.3, US	B, LPC	bus / Wi							
Front ports Rear ports Rear audio Audio External sp Internal sp Ethernet	ports peakers	Super I/O for serial, parallel, keyboard, mouse functions  Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)  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)  Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.  High Definition (HD) audio, ALC662 codec  None  None  10/100 ethernet on planar, Intel 82562GZ (PHY/MAC)						lels)	Availabl	e at the	se reta	illers	
Modem Security ch	nip	Some: 56K <sup>10</sup> V.S None	92 data/fax sol	t modem, PC	21 adapte	er			<ul> <li>B&amp;H<sup>1</sup></li> <li>J&amp;R<sup>1</sup></li> </ul>	М		<del>-</del>	
TV tuner Camera		None Some: Lenovo I	Bright Eye can	nera, 0.3-me	gapixel,	fixed foc	us		<ul> <li>Newe</li> </ul>		ı∟K‴		
Keyboard 104-key anti-bacterial keyboard (PS/2 connector) Mouse Optical Wheel Mouse (USB connector), 400 dpi Power supply 280 watts, universal, manual switch							■ TigerĎiřect  Limited Warranty¹  → 1-year parts and labor						
Preloaded operating system <sup>20</sup> - Microsoft® Windows® Vista® Home Premium Edition (32-bit)				Preloaded applications <sup>5</sup> 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)					Cust parts for s Mon next Serv (in e • 3-y 9x = 24x7 issue	omer Ros only (velected - Fri coobusines) ice upg ligible loger Ler 5 Next E	eplace vith lin parts <sup>3</sup> , verage ss day rade operation ovo O Busine ee sup	able Unit (CR nited onsite s , 8 am - 5 pm, excluding ho response tim ptions	ervice blidays, e) 8882) anty

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	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 <sup>2</sup>	DVD	GMA 3100		None		Home Basic	Jul 08
5313-3BU	4x5	Celeron E1200	1.60	512KB	2	1GB	16-in-1	250GB	<b>DVD</b> ±RW	GMA 3100	Mod	None		Home Prem	Jul 08
5313-4AU	4x5	Pentium E2180	2.00	1MB	2	2GB	16-in-1	320GB	<b>DVD</b> ±RW	GMA 3100	Mod	None	Camera	Home Prem	Jul 08
5313-4BU	4x5	Pentium E2180	2.00	1MB	2	3GB	16-in-1	500GB	<b>DVD</b> ±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	<b>DVD</b> ±RW	GMA 3100		None		Home Prem	Oct 08
5313-4CU	4x5	Pentium E2200	2.20	1MB	2	4GB	16-in-1	500GB	<b>DVD</b> ±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 Implementation	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; E2180/E2200: 1MB L2 cache; E5200: 2MB L2 cache Processor in FC-LGA6 package in LGA775 socket	<ul><li>180mm W )</li><li>21.5 lb (9.7)</li><li>Toolless co</li><li>Toolless dis</li></ul>	7.0" D X 15.0" H X 432mm D X 380mm H 5 kg)
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max <sup>8</sup> , 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 ② 5.25", Bay ③ 3.0",	1.6" high, access, standard optical open 1" high, access, 1" high, access, 1" high, access, 10-in-1 media reader 1" bigh,
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-le	1" high, no access, optional disk
SATA disk SATA controller SATA DVD SATA DVD±RW SATA cables EIDE controller EIDE cables	160GB, 250GB, 320GB, 500GB, or 640GB SATA 3Gb/s, 7200 rpm Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH Some: DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Some: Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors One None	Slot 3: half-le Slot 4: half-le	ength, full-height, PCI Express x16 Ver 1.1 ength, full-height, 32-bit PCI Ver 2.3 * ength, full-height, 32-bit PCI Ver 2.3 slot in some models
Diskette drive Media reader Chipset	None Some: 16-in-1 media reader, internal USB 2.0 Intel G31 Express Chipset; I/O Controller Hub 7 Digital Home (ICH	7DH) for	
Front ports	SATA 3Gb/s, PCI Express® x1, PCI 2.3, USB, LPC bus / Winbond® V Super I/O for serial, parallel, keyboard, mouse functions  Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	/83627DHG	
Rear ports  Rear audio ports Audio External speakers Internal speaker Ethernet Modem Security chip	Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, High Definition (HD) audio, ALC662 codec	,	
TV tuner Camera	None Some: Lenovo Bright Eye camera, 0.3-megapixel, fixed focus		
Keyboard Mouse Power supply	104-key antibacterial keyboard (PS/2 connector) Optical Wheel Mouse (USB connector), 400 dpi 280 watts, universal, manual switch		



16-in-1 media reader

### Preloaded operating system<sup>20</sup> Some: Microsoft® Windows® Vista®

Home Basic Edition (32-bit) Some: Microsoft Windows Vista Home Premium Edition (32-bit)

♦ 5313-3AU/3BU: Vista Basic logo ♦ Others: Vista Premium logo

## Preloaded applications<sup>5</sup>

- Lenovo™ OneKey Recovery
- · Lenovo Healthcare Software
- Lenovo Media Studio
- Driver and Application Installation
  Trend Micro™ PC-cillin™ Internet Security 2007
- EarthLink®
- Windows Live™ Toolbar

- Windows Live<sup>™</sup> Toolbal
   Microsoft Office 2007 Trial (60-day)
   VeriFace<sup>™</sup> Facial Recognition<sup>™</sup>
   Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD, DVD±RW)
   CyberLink Power2Go (DVD, DVD±RW)

#### Available at these retailers

- lenovo.com
- Fry's

#### Limited Warranty<sup>1</sup>

1-year parts and labor

- Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 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) 24x7<sup>14</sup> 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	Media reader		SATA optical	Graphics	Modem	Monitor	Cam- era	Vista preload	Avail date
135	5313-1FU	4x5 Core	e 2 Duo E7200	2.53	3MB	2	4GB	16-in-1	640GB <sup>2</sup>	DVD±RW	GMA 3100	None	None		Home Prem	Oct 08
	5313-2BU	4x5 Core	e 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	e 2 Quad Q6600	2.40	8MB	4	4GB	16-in-1	500GB	Blu-ray	9300 GE	None	None	Cam	Home Prem	Jul 08
132	5313-2FU	4x5 Core	e 2 Quad Q6600	2.40	8MB	4	4GB	16-in-1	1TB	Blu-ray	9300 GE	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  Implementation	Intel® Core 2 Duo™ Processor E7200 with dual-collintel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q6600 with quad-cor (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 8MB L2 cache Processor in FC-LGA6 package in LGA775 socket		<ul> <li>180mm W &gt;</li> <li>21.5 lb (9.79)</li> <li>Toolless coverage</li> <li>Toolless discoverage</li> </ul>	1.0" D X 15.0" H 4 432mm D X 380mm H 5 kg) ver removal k, optical drive removal			
Memory	4GB std, 4GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 240-pin DIMM <i>Italics:</i> standard memory in both sockets; no soc						
Graphics	Some: Intel Graphics Media Accelerator 3100 (Gintegrated graphics in G31, uses main memone 15-pin analog D-sub connector  Some: NVIDIA® GeForce® 9300 GE, PCI Express® 256MB memory, DirectX® 10, TurboCache, PureVideo™ HD technology, S-video out, VG DVI-I connector, HDCP-compliant	x16,	Bay © 3.0°, 1" high, access, 16-in-1 media real Bay © 3.0°, 1" high, access, 16-in-1 media real Bay © 3.5°, 1" high, no access, standard disk Bay © 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. 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 SATA controller SATA DVD±RW SATA Blu-ray™ SATA cables EIDE controller EIDE cables Diskette drive Media reader	500GB, 640GB, or 1TB, SATA 3.0Gb/s, 7200 rpm Serial ATA, SATA 3.0Gb/s, integrated in ICH7DH Some: Multi-Burner DL DVD±RW SATA 1.5Gb/s Driv Some: Blu-ray Disc reader (no Blu-ray media burning supports HD-DVD playback, DVD and CD rec Two SATA cables (each 1-drop to device), four SATA One None None 16-in-1 media reader, internal USB 2.0	B, or 1TB, SATA 3.0Gb/s, 7200 rpm  ITA 3.0Gb/s, integrated in ICH7DH  Burner DL DVD±RW SATA 1.5Gb/s Drive  / Disc reader (no Blu-ray media burning), BD-ROM,  ts HD-DVD playback, DVD and CD recordable les (each 1-drop to device), four SATA connectors					
Chipset	Intel G31 Express Chipset; I/O Controller Hub 7 Dig SATA 3Gb/s, PCI Express® x1, PCI 2.3, USB, LPC bu Super I/O for serial, parallel, keyboard, mouse function						
Front ports Rear ports Rear audio ports Audio External speakers Internal speaker Ethernet Modem Security chip	Two USB 2.0, microphone (stereo, 3.5mm), headpho Four USB 2.0, one serial (9-pin), parallel (25-pin), ker mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DV Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), mich High Definition (HD) audio, ALC662 codec None None 10/100 ethernet on planar, Intel 82562GZ (PHY/MAC None None	els)					
TV tuner Camera	None Some: Lenovo Bright Eye camera, 0.3-megapixel, fix	ked focus		Available at these retai	lore		
Keyboard Mouse Power supply	104-key anti-bacterial keyboard (PS/2 connector) Optical Wheel Mouse (USB connector), 400 dpi 280 watts, universal, manual switch			lenovo.com     Fry's	1013		
Preloaded oper - Microsoft® Win Home Premiur	dows® Vista® • Lenovo™ OneKey R n Edition (32-bit) • Lenovo Healthcare	Recovery Software io on Installation Illin™ Internet Solbar OT Trial (60-day) ecognition™ VD±RW, Blu-ray	/)	next business day r Service upgrade op (in eligible location • 3-year Lenovo Or	oor able Unit (CRU) ited onsite service 8 am - 5 pm, excluding holidays, response time) itions s): site Repair ss Day (43R8882) port for warranty		

issues during the warranty period<sup>1</sup> via 877-453-6686

Slot x Type-model bay		GHz	L2 cache	Cores	Memory	Media 8 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 <sup>2</sup>	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±ŔW	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	J	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  Implementation	Intel® Pentium® Dual-Core Processor E with dual-core, Intel 64 Technology, Exec 800MHz system bus; E2220: 1MB L2 cache; E5200: 2MB L2 Intel Core™ 2 Quad Processor Q8200 (dual-core on dual-die), Intel 64 Technolog EIST, 1333MHz system bus, and 4MB L2 Processor in FC-LGA6 package in LGA7	cute Disable Bit, EIST, cache or with <b>quad-core</b> ygy, Execute Disable Bit, cache	• 180mm W > • 21.5 lb (9.79) • Toolless cov • Toolless dis	′.0" D X 15.0" H 〈 432mm D X 380mm H 5 kg)			
Memory	2GB or 4GB std, 4GB max <sup>8</sup> , PC3-8500 1 non-parity, dual-channel capable, two 24 <i>Italics:</i> standard memory in both so <i>Non-italics:</i> standard memory in one soc	0-pin DIMM sockets ckets; no sockets available;	Bay ① 5.25", 1.6" high, access, standard cole; Bay ② 5.25", 1.6" high, access, open Bay ③ 3.0", 1" high, access, 16-in-1 me				
Graphics	Some: Intel Graphics Media Accelerate integrated graphics in G43, uses DirectX® 10, one 15-pin analog № NVIDIA® GeForce® 9300 GE, PC 512MB memory, DirectX® 10, Turneviredoo™ HD technology, S-viv VGA DB-15 connector, DVI-I con	main memory, 'GA DB-15 connector CI Express® x16, rboCache, ideo out for TV-out,	Slot 2: half-le Slot 3: half-le Slot 4: half-le				
SATA disk SATA controller SATA DVD±RW SATA Blu-ray™	Serial ATA, SATA 3.0Gb/s, integrated in IO Some: Multi-Burner DL DVD±RW SATA	** used bright street with the street of the street with the street of t					
SATA cables EIDE controller Diskette drive Media reader	Two SATA cables (each 1-drop to device) None None 16-in-1 media reader, internal USB 2.0	, four SATA connectors		lestrovo —			
Chipset	Intel G43 Express Chipset (PCI Express [ICH10] (SATA 3.0Gb/s, PCI Express x1, SMSC® SCH5147-NW Super I/O			1			
Front ports Rear ports  Rear audio ports Audio External speakers Internal speaker Wireless Ethernet Modem	Two USB 2.0, microphone (stereo, 3.5mr Six USB 2.0, one serial (9-pin), keyboard 1BU/2CU/2DU: monitor (VGA DB-15, I Others: monitor (VGA DB-15, I ine-in (stereo, 3.5mm), line-out (stereo, High Definition (HD) audio, ALC662 code None None Some: 11b/g wireless <sup>4</sup> , Broadcom BCM-10/100 ethernet on planar, Realtek® RTL None	I (PS/2), mouse (PS/2), ethe DVI-I), S-Video out; 3.5mm), microphone-in (ste ec	ernet (RJ-45),	*Alamanage			
Security chip TV tuner Camera	None None None			Available at these retailers  I lenovo.com  Fry's			
Keyboard Mouse Power supply	104-key antibacterial keyboard (PS/2 cor Optical Wheel Mouse (USB connector), 4 280 watts, universal, manual switch		Circuit City®  Limited Warranty¹  1 year parts and labor.				
Preloaded opera - Microsoft® Wind Home Premium	ting system <sup>20</sup> Preloade           dows® Vista®         • Lenovo®           a Edition (64-bit)         • Driver a	d applications <sup>5</sup> <sup>9</sup> OneKey Recovery  nd Application Installation licro™ PC-cillin™ Internet So	ecurity 2008	<ul> <li>1-year parts and labor</li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays,</li> </ul>			

- Windows Live<sup>TM</sup> Toolbar
   Microsoft Office 2007 Trial (60-day)
   Corel® WinDVD® (DVD±RW, Blu-ray)
   CyberLink Power2Go (DVD±RW, Blu-ray)

- 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 (43R8882)

  24x7¹⁴ toll-free support for warranty issues during the warranty period¹ via 877-453-6686

- · 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	Tower
Implementation	with dual-core, 800MHz system bus;  E2220: 1MB L2 cache; E5200: 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;  Q8200: 4MB L2 cache; Q9400: 6MB L2 cache Processor in FC-LGA6 package in LGA775 socket	Black color 7.1" W X 17 180mm W X 21.5 lb (9.79 Toolless cov Toolless dis Toolless ada
Memory	4GB, 5GB, 6GB, or 8GB std, 8GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, four 240-pin DIMM sockets	Bay ① 5.25", Bay ② 5.25",
Graphics	Some: Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in G33, uses main memory, one 15-pin analog VGA DB-15 connector  Some: 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 ③ 3.0", Bay ④ 3.5", Bay ⑤ 3.5", Slot 1: half-lei Slot 2: half-lei Slot 3: half-lei Slot 4: half-lei
SATA disk SATA controller SATA DVD±RW SATA Blu-ray™	500GB, 640GB, or 1TB SATA 3Gb/s, 7200 rpm Serial ATA, SATA 3.0Gb/s, integrated in ICH9DH Some: Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Some: Blu-ray Disc reader (no Blu-ray media burning), BD-ROM, DVD and CD recordable	* Wireless ac
SATA cables EIDE controller Diskette drive Media reader	Two SATA cables (each 1-drop to device), four SATA connectors None None 16-in-1 media reader, internal USB 2.0	
Chipset	Intel G33 Express Chipset (PCI Express® x16), I/O Controller Hub Home [ICH9DH] (SATA 3.0Gb/s, PCI Express x1, ethernet MAC, PC LPC bus), SMSC® SCH5617 Super I/O	9 Digital I 2.3, USB,
Front ports Rear ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5m Four USB 2.0, one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), 4DU/5AU: monitor (VGA DB-15, DVI-I), S-Video out; monitor (VGA DB-15)	,
Rear audio ports  Audio External speakers Internal speaker Ethernet Wireless Modem Security chip	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (ste SPDIF-out High Definition (HD) audio, ADI1988 codec None None Gigabit ethernet on planar, Intel 82256GC Some: 11b/g wireless <sup>4</sup> , Broadcom® BCM4312, PCIe x1 adapter None None	reo, 3.5mm),
TV tuner  Remote control Camera	Some: Hybrid tuner, support analog (NTSC) and digital (ATSC) s Hauppauge WinTV-HVR-1250,PCIe x 1 Some: Philips® Vista MCE remote control (40-button), IR receiver v None	
Keyboard Mouse Power supply	104-key antibacterial keyboard (PS/2 connector) Optical Wheel Mouse (USB connector), 400 dpi 280 watts, universal, manual switch	
Preloaded opera		

Home Premium Edition (64-bit) ♦ 5359-4DU/5AU: Vista Premium logo ♦ Others: Vista Basic logo

- 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)

- bezel
- 7.0" D X 15.0" H
- X 432mm D X 380mm H
- '5 kg)
- ver removal
- sk, optical drive removal
- lapter retention

, 1.6" high, access, 1.6" high, access, 1" high, access, standard optical open 16-in-1 media reader

1" high, no access, standard disk 1" high, no access, optional disk

ength, full-height, PCI Express x16 Ver 1.1 \*\* ength, full-height, PCI Express x1 Ver 1.1 \* ength, full-height, PCI Express x1 Ver 1.1 \* ength, full-height, 32-bit PCI Ver 2.3

dapter or TV tuner in slot in some models

me models



Available at these retailers

- lenovo.com
- Circuit City®
- Fry's

#### Limited Warranty<sup>1</sup>

1-year parts and labor Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 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) 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period1 via 877-453-6686

# **IdeaCentre™ Accessories**

Partial list of accessories supported on: IdeaCentre K210, K220, and K230		
Storage and removable storage USB 2.0 MyKey E10 Flash Drive 1GB USB 2.0 MyKey E10 Flash Drive 2GB USB 2.0 MyKey E10 Flash Drive 2GB USB 2.0 MiniKey E10 Flash Drive 4GB USB 2.0 MiniKey M10D1 Flash 2GB (gray) USB 2.0 MiniKey M10D2 Flash 2GB (black) USB 2.0 MiniKey M10E1 Flash 2GB (teal) USB 2.0 MiniKey M10E2 Flash 2GB (pink) USB 2.0 Essential Memory Key 4GB USB 2.0 Essential Memory Key 8GB USB 2.0 Essential Memory Key 32GB USB 2.0 Security Memory Key 1GB USB 2.0 Security Memory Key 4GB USB 2.0 Security Memory Key 4GB USB 2.0 Security Memory Key 4GB USB 2.0 DataSlim E16 Portable HD 160GB USB 2.0 Portable 160GB Hard Disk USB 2.0 Portable Secure 160GB Hard Disk USB 2.0 Portable Secure 320GB Hard Disk	45J7701 ann 04/29/08 45J7702 ann 04/29/08 45J7752 ann 05/20/08 45J7754 ann 05/20/08 45J7756 ann 05/20/08 45J7758 ann 05/20/08 45J7904 ann 06/24/08 45J7905 ann 07/15/08 45K1258 ann 10/28/08 41U5118 ann 07/17/07 41U5119 ann 07/17/07 41U5120 ann 07/17/07 41U5120 ann 07/17/07 41U5120 ann 07/17/07 43R1784 ann 09/23/08 43R2018 ann 11/18/08	
Keyboard Preferred Pro USB Keyboard Enhanced Performance USB Keyboard Wireless Kybd & Opt Wheel Mouse (via USB) USB Keyboard with UltraNav USB Travel Keyboard with UltraNav	73P5220 ann 06/21/05 73P2620 ann 03/23/04 73P4067 ann 12/07/04 31P8950 ann 01/28/03 31P9490 ann 04/27/04	
Mouse Laser Tilt Wheel Mouse (USB, PS/2) IdeaPad Mini Optical Mouse M10 (black) IdeaPad Mini Optical Mouse M30 (black) Lenovo Mini Optical Mouse M30 (white) Lenovo Mini Optical Mouse M30 (white) Lenovo Mini Optical Mouse M30 (red) Lenovo Mini Optical Mouse M30 (blue) Mini Wireless Laser Mouse N10 (black) Mini Wireless Laser Mouse N10 (red)	41U3074 ann 01/23/07 47J7729 ann 06/17/08 45J7730 ann 07/15/08 47J7735 ann 06/17/08 47J7736 ann 06/17/08 47J7738 ann 06/17/08 45J7731 ann 06/17/08 45J7732 ann 06/17/08	
Monitors ThinkVision® L174 17" Monitor ThinkVision L1700p 17" Monitor ThinkVision L1900p 19" Monitor ThinkVision L1940p Wide 19" Monitor ThinkVision L200p Wide 20.1" Monitor ThinkVision L2240p Wide 22" Monitor ThinkVision L2440p Wide 24" Monitor ThinkVision L2440x Wide 24" Monitor	9227AE1 ann 04/15/08 9417HE2 ann 09/17/08 4431HE1 ann 11/11/08 4424HB6 ann 09/17/08 4438HB6 ann 09/17/08 4422HB6 ann 09/17/08 4420HB2 ann 09/17/08	
Monitor Accessories <sup>46</sup> ThinkVision USB Soundbar ThinkVision Soundbar (L1900p, 24" Wide) Kensington Cable Lock from Lenovo Kensington Twin Head Cable Lock ThinkPad Convertible Monitor Stand Radial Arm  46 Compatible on selected ThinkVision monito More information at www.lenovo.com/support		
wore information at www.ienovo.com/suppor	Villotittoraccessories	
Consumer monitors Lenovo L195 Wide 19" LCD Monitor Lenovo L222 Wide 22" LCD Monitor	4418HC1 ann 09/02/08 4432HF1 ann 09/02/08	
Other accessories at www.lenovo.com/acces	ssories	
Accessories Guide pdf at www.lenovo.com/ac	ccessoriesguide	
·	-	

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- Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.
- <sup>2</sup> Hard disk drive: GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- <sup>3</sup> 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.
- 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.
- <sup>9</sup> Service upgrade options: Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warrantyperiod. Service levels are response time objectives and are not guarantees.
- <sup>10</sup> 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.
- <sup>14</sup> Response times may vary. May exclude some holidays. Telephone support may be subject to additional charges.
- 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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