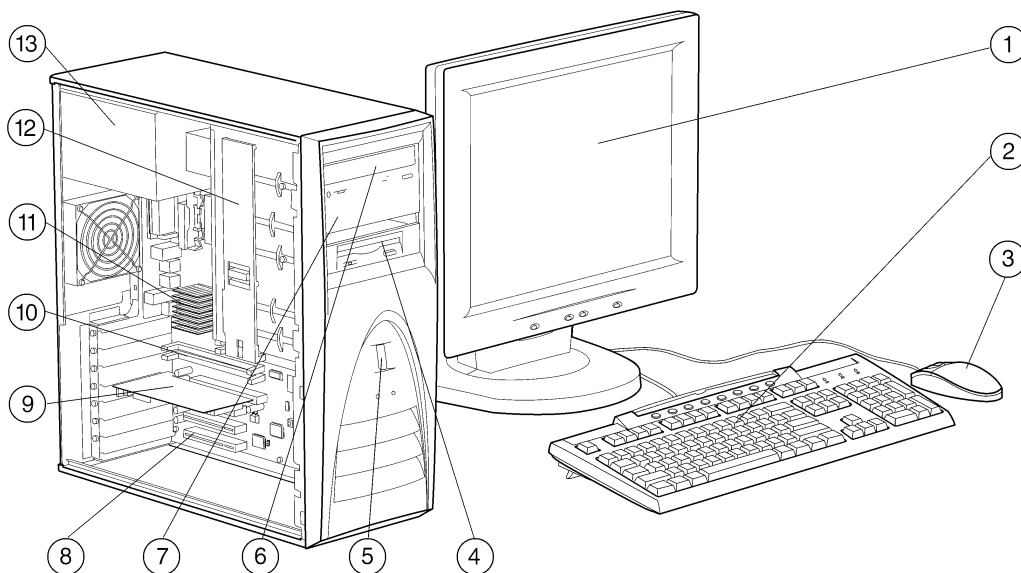


### Overview

#### At A Glance

- Convertible minitower form factor
- Supports up to two Intel® Xeon® processors, up to 2.2-GHz (400 MHz Front Side Bus)
- Intel 860 chipset with 400-MHz front side bus and dual memory channels
- 512-KB L2 cache integrated on processor
- ECC RDRAM expandable to 2 GB
- High-performance Ultra160 SCSI 10,000 rpm or 15,000 rpm hard drives or UATA/100 7200 rpm hard drives
- Integrated Ultra160 SCSI and Ultra ATA/100 controllers
- Up to 360 GB of high-performance internal storage
- Choice of NVIDIA® Quadro2 EX, NVIDIA Quadro2 MXR, NVIDIA Quadro2 Pro, Matrox® Millennium® G450, Matrox G200 Quad Multi-monitor Series, Matrox Millennium G550, ATI Fire GL2, ATI Fire GL4, or 3Dlabs Wildcat™ II 5110 Graphics Controller
- Multiple display support
- Integrated Intel PRO/100+ Management Adapter
- Four total slots (three PCI and one AGP Pro 4X)
- Five bays (three external and two internal)
- CD-ROM, DVD-ROM, or CD-RW drive (depending on model)
- SoundBlaster 128 audio
- Windows® XP® Professional, Windows 2000® Professional and Compaq support software pre-installed
- Protected by Compaq Services, including a three-year, limited warranty — certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details. Three-year onsite and labor not available in all countries.



1. Compaq Monitor (optional)
2. Compaq Keyboard
3. Compaq 3-button Mouse
4. 1.44-MB Diskette Drive
5. On-Off Button
6. CD-ROM Drive or DVD-ROM Drive
7. 5.25-in Drive Bay (available)
8. PCI Slots
9. AGP Pro 4x slot
10. Memory Sockets
11. Processors
12. Drivelock
13. 460-Watt Power Supply

### Standard Features - Pre-configured Models

<b>Models</b>	<b>Compaq Evo Workstation W6000</b> Available in multiple configurations. Not all configurations available in all countries. Check with your Authorized Compaq Reseller or Compaq.	
<b>Processor</b> <i>One of the following:</i>	Intel Xeon processor 1.8 GHz, 512-KB cache Intel Xeon processor 2.0 GHz, 512-KB cache Intel Xeon processor 2.2 GHz, 512-KB cache	
<b>Cache Memory</b>	512-KB integrated, full speed Level 2 cache per processor	
<b>Upgradability</b>	Upgradable to dual processor	
<b>Memory</b> <i>One of the following:</i>	Standard	1 GB of 800-MHz ECC RDRAM
	Standard	512 MB of 800-MHz ECC RDRAM
	Maximum	2 GB of 800-MHz ECC RDRAM
<b>Network Controller</b>	Integrated Intel PRO/100+ Management Adapter	
<b>Expansion Slots</b>	I/O (Total)	4, up to 3 available
	32-bit/33-MHz PCI	3, up to 3 depending on model
	AGP Pro 4X	1, up to 1 depending on model
<b>Expansion Bays</b>	(Total/Available)	5/2
	Internal	2/1
	External	3/1
<b>Storage</b>	Diskette Drive	1.44 MB
	Removable Media	CD-ROM, or DVD-ROM Drive
	Hard Drive	18.2-GB Ultra160 SCSI (10,000 rpm)
<b>Interfaces</b>	Parallel	1
	USB	4
	Serial	2
	Ultra160 SCSI	1 (68-pin internal)
	Ultra ATA/100	2
	Keyboard (PS/2)	1
	Pointing Device (PS/2 mouse)	1
	Video	1
	Microphone Jack	1
	Headphone Jack	1
	Line-In Jack	1
	Line-Out Jack	1
	RJ-45	1

### Standard Features - Pre-configured Models

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<b>Graphics</b> <i>One of the following:</i>	Matrox Millennium G550 with analog and DVI cables (AGP) Matrox Millennium G450 (AGP or PCI) Matrox G200 Quad Multi-monitor Series (PCI) NVIDIA Quadro2 EX (AGP) NVIDIA Quadro2 MXR (AGP) NVIDIA Quadro2 Pro (AGP) ATI Fire GL2 (AGP) ATI Fire GL4 (AGP) 3Dlabs Wildcat II 5110 (AGP)
<b>Audio</b>	Integrated SoundBlaster 128 Audio
<b>Software</b>	Windows 2000 SP2/Windows XP Professional (dual install) Windows XP Professional Windows 2000 Professional or Microsoft Windows NT Workstation 4.0 Microsoft Service Pack 2 for Windows 2000 Professional Microsoft Service Pack 6a for Windows NT 4.0 Compaq Restore CD Compaq Management Agents Compaq PC Diagnostics via the Web ROM-based Setup Diagnostics for Windows 2000 and Windows NT Microsoft Internet Explorer System Software Manager via the Web Altiris eXpress (Limited time license)
<b>Intelligent Manageability</b>	Asset Control Alert on LAN (AoL) hardware ready Wake on LAN (WoL) Fault Management Lite Console Security Management Pre-Failure Warranty (processors, hard drives and memory) <b>Remote Management</b> Remote Wakeup via Magic Packet Support Remote ROM Flash Remote Security Remote Shut Down <b>Bios Features</b> Advanced Configuration and Power Interface (ACPI) 1.0b Advanced Power Management (APM) 1.2 Desktop Management Interface (DMI) 2.1 System Management (SM) Bios 2.3
<b>Security</b>	Diskette write and boot control Flash ROM lock Keyboard password Network server mode Parallel interface control Power-on password Serial interface control Setup password Cable lock provision
<b>Power Supply</b>	460-Watt, with Power Factor Correction
<b>Service and Support</b>	Protected by Compaq Services including a three-year, limited warranty with three-year parts coverage, three year, on-site service, and three-year labor; 7 x 24 hardware technical phone support and on-line support through the Internet; Pre-Failure Warranty coverage of hard drives, memory, and processors. <b>Note:</b> Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details. Three-year, onsite and labor not available in all countries.

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### Pre-configured Models

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<b>W6P/2.2/18S/512/Xd</b> <i>470029-950 and graphics option</i>	<b>Processor</b>	Intel Xeon 2.2 GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	512-MB 800-MHz ECC RDRAM
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)

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<b>W6P/2.2/18S/1/Xd</b> <i>470029-977 and graphics option</i>	<b>Processor</b>	Intel Xeon 2.2 GHz
	<b>Cache Memory</b>	512-KB integrated, L2
	<b>Memory</b>	1-GB 800-MHz ECC RDRAM
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)

### Pre-configured Models

<b>W6P/2.0/18S/512/Xd</b> <i>470031-197 and Compaq after market graphics option</i>	<b>Processor</b>	Intel Xeon 2.0 GHz	
	<b>Cache Memory</b>	512-KB integrated L2	
	<b>Memory</b>	512-MB 800-MHz ECC RDRAM	
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive	
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000rpm	
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)	
	<b>Audio</b>	Integrated SoundBlaster 128 Audio	
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)	
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	<b>W6P/2.0/18S/1/Xd</b> <i>470031-208 and Compaq after market graphics option</i>	<b>Processor</b>	Intel Xeon 2.0 GHz
<b>Cache Memory</b>		512-KB integrated, L2	
<b>Memory</b>		1-GB 800-MHz ECC RDRAM	
<b>Optical Drive</b>		16X/40X DVD-ROM Drive	
<b>Hard Drive</b>		18.2-GB Ultra160 SCSI 10,000rpm	
<b>Graphics</b>		Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)	
<b>Audio</b>		Integrated SoundBlaster 128 Audio	
<b>OS</b>		Windows 2000 SP2/Windows XP Professional (dual install)	

### Pre-configured Models

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<b>W6P/1.8/18S/512/Xd</b> <i>470031-273 and Compaq after market graphics option</i>	<b>Processor</b>	Intel Xeon 1.8-GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	512-MB 800-MHz ECC RDRAM
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)

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<b>W6P/1.8/18S/1/Xd</b> <i>470031-304 and Compaq after market graphics option</i>	<b>Processor</b>	Intel Xeon 1.8-GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	1-GB 800-MHz ECC RDRAM
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)

### Pre-configured Models

<b>W612.2118S10/Xc</b> <i>470029-895 and Compaq after-market graphics option and memory option</i>	<b>Processor</b>	Intel Xeon 2.2 GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	48X Max CD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)

<b>W612.2136S10/Xd</b> <i>470029-904 and Compaq after-market graphics option and memory option</i>	<b>Processor</b>	Intel Xeon 2.2-GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive
	<b>Hard Drive</b>	36.4-GB Ultra160 SCSI 10,000 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 Professional/Windows NT Workstation 4.0 (dual install)

### Pre-configured Models

<b>W6/2.2/40A/0/Xc</b> <i>470029-911 and Compaq after-market graphics option and memory option</i>	<b>Processor</b>	Intel Xeon 2.2 GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	48X Max CD-ROM Drive
	<b>Hard Drive</b>	40-GB Ultra ATA/100 7200 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)

<b>W6/2.0/40A/0/Xc</b> <i>470031-142 and Compaq after-market graphics option and memory option</i>	<b>Processor</b>	Intel Xeon 2.0 GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	48X Max CD-ROM Drive
	<b>Hard Drive</b>	40-GB Ultra ATA/100 7200 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)



### Pre-configured Models

<b>W6/2.0/18S/0/Xc</b> <i>470031-140 and Compaq after-market graphics option and memory option</i>	<b>Processor</b>	Intel Xeon 2.0 GHz
	<b>Cache Memory</b>	512-KB integrated L2
<b>W6/2.0/18K/0/Xd</b> <i>470031-144 and Compaq after-market graphics option and memory option</i>	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	48X Max CD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)
	<b>Processor</b>	Intel Xeon 2.0-GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 15,000 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)	

### Pre-configured Models

<b>W6/2.0/36S/0/Xd</b> <i>470031-146 and Compaq after-market graphics option and memory option</i>	<b>Processor</b>	Intel Xeon 2.0-GHz
	<b>Cache Memory</b>	512-KB integrated L2
<b>W6/1.8/40A/0/Xc</b> <i>470031-243 and Compaq after-market graphics option and memory option</i>	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	16X/40X DVD-ROM Drive
	<b>Hard Drive</b>	36.4-GB Ultra160 SCSI 10,000 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)
	<b>Processor</b>	Intel Xeon 1.8-GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	48X Max CD-ROM Drive
	<b>Hard Drive</b>	40-GB Ultra ATA/100 7200 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)	

### Pre-configured Models

<b>W6/1.8/18S/0/Xc</b> <i>470031-241 and Compaq after-market graphics option and memory option</i>	<b>Processor</b>	Intel Xeon 1.8 GHz
	<b>Cache Memory</b>	512-KB integrated L2
	<b>Memory</b>	Choice of memory option: 512-MB Memory Module (800-MHz ECC) (103996-B21) 256-MB Memory Module (800-MHz ECC) (157341-B21) 128-MB Memory Module (800-MHz ECC) (157338-B21) <b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module.
	<b>Optical Drive</b>	48X Max CD-ROM Drive
	<b>Hard Drive</b>	18.2-GB Ultra160 SCSI 10,000rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 Graphics Controller (AGP) (250227-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox G200 Quad MMS with analog cables (159513-B21) Matrox G200 Quad MMS with DVI cables (179597-B21) NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 MXR (221412-B21) NVIDIA Quadro2 Pro (225339-B21) ATI Fire GL2 (224087-B21) ATI FireGL4 (245012-B21) 3Dlabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio
	<b>OS</b>	Windows 2000 SP2/Windows XP Professional (dual install)

### Standard Features – Custom Configuration Models

<b>Processor</b>	Intel Xeon processor 1.8 GHz, 512-KB cache	
<i>One of the following:</i>	Intel Xeon processor 2.0GHz, 512-KB cache	
	Intel Xeon processor 2.2 GHz, 512-KB cache	
<b>Cache Memory</b>	512-KB integrated, full speed Level 2 cache per processor	
<b>Upgradability</b>	Upgradable to dual processor	
<b>Memory</b>	Maximum	2 GB of 800-MHz ECC RDRAM
<b>Network Controller</b>	Integrated Intel PRO/100+ Management Adapter 3COM 3C920C PCI card	
<b>Expansion Slots</b>	I/O (Total) 32-bit/33-MHz PCI AGP Pro 4X	4, up to 3 available 3, up to 3 depending on model 1, up to 1 depending on model
<b>Expansion Bays</b>	(Total/Available) Internal External	5/2 2/1 3/1
<b>Storage</b>	Diskette Drive	1.44 MB
	Removable Media	CD-ROM, CD-RW or DVD-ROM drive
	Hard Drives	72-GB, 36.4-GB, 18.2-GB Ultra160 SCSI (10,000 rpm) 36.4-GB, 18.2-GB Ultra160 SCSI (15,000 rpm) 120-GB, 80, 60-GB, 40-GB or 20-GB Ultra ATA/100 (7200 rpm)
	Tape Drives	TR5 10/20-GB 250-MB ATAPI ZIP Ecrix 33/66 GB VXA-1 Tape Drive (SCSI or IDE)
<b>Interfaces</b>	Parallel USB Serial Ultra160 SCSI Ultra ATA/100 Keyboard (PS/2) Pointing Device (PS/2 mouse) Video Microphone Jack Headphone Jack Line-In Line-Out RJ-45	1 4 2 1 (68-pin internal) 2 1 1 1 1 1 1 1 1 1
<b>Graphics</b>	Matrox Millennium G550 with analog and DVI cables (AGP) Matrox Millennium G450 (AGP or PCI) <i>One of the following:</i> Matrox G200 Quad Multi-monitor Series (PCI) NVIDIA Quadro2 EX (AGP) NVIDIA Quadro2 MXR (AGP) NVIDIA Quadro2 Pro (AGP) ATI Fire GL2 (AGP) ATI FireGL4 (AGP) 3Dlabs Wildcat II 5110 (AGP)	

### Options

<b>Processor</b>	Intel Xeon processor 1.8 GHz, 512-KB cache	277599-B21
	Intel Xeon processor 2.0 GHz, 512-KB cache	277600-B21
	Intel Xeon processor 2.2 GHz, 512-KB cache	267805-B21
<b>Note:</b> When adding an additional processor, both processors must have the same speed and cache size.		
<b>Memory (RDRAM)</b>	512-MB Memory Module Upgrade Kit (800-MHz ECC)	103996-B21
	256-MB Memory Module Upgrade Kit (800-MHz ECC)	157341-B21
	128-MB Memory Module Upgrade Kit (800-MHz ECC)	157338-B21
<b>Note:</b> Memory must be installed in like pairs. Option kits contain one memory module. Only 800-MHz speed is qualified..		
<b>Monitors</b>	TFT8030 Flat Panel Color Monitor (18-inch, Carbon/Silver)	234362-001
	TFT8020 Flat Panel Color Monitor (18-inch, Carbon)	159244-001
	TFT8020 Flat Panel Color Monitor (17-inch, Opal)	326100-001
	TFT7020 Flat Panel Color Monitor (17-inch, Carbon/Silver, baseless)	253218-001
	TFT7020 Flat Panel Color Monitor (17-inch, Carbon/Silver, built in speakers)	253217-001
	TFT5030 Flat Panel Color Monitor (15-inch, Carbon/Silver)	228134-001
	TFT5015 Flat Panel Color Monitor (15-inch, Multimedia)	234046-001
	TFT5015 Flat Panel Color Monitor (15-inch, Carbon/Silver)	234044-001
	TFT5015 Flat Panel Color Monitor (15-inch, Opal)	234043-001
	P1220 CRT Color Monitor (22-inch, Carbon/Silver)	244374-001
	P920 CRT Color Monitor (19-inch, Carbon/Silver)	244375-001
	P720 CRT Color Monitor (17-inch, Carbon/Silver Two Tone)	244373-001
	V720 CRT Color Monitor (17-inch, Carbon/Silver Two Tone)	232944-001
<b>Note:</b> AssetControl monitor. AssetControl features are accessible with Compaq Workstations featuring Intelligent Manageability.		
<b>Graphics</b>	Matrox G200 Quad Multi-monitor Series with cables for analog output (PCI)	159513-B21
	Matrox G200 Quad Multi-monitor Series with cables for DVI output (PCI)	179597-B21
	Matrox G200 Quad MMS DVI Upgrade Cable Kit (for option kit 159513-B21)	170840-B21
	Matrox Millennium G550 with analog and DVI cables (AGP)	250227-B21
	Matrox Millennium G450 (PCI)	202390-B21
	Matrox Millennium G450 (AGP)	202389-B21
	NVIDIA Quadro2 EX (AGP)	250066-B21
	NVIDIA Quadro2 MXR (AGP)	221412-B21
	NVIDIA Quadro2 Pro (AGP)	225339-B21
	ATI FireGL2 (AGP)	224087-B21
	ATI FireGL4 (AGP)	245012-B21
	3Dlabs Wildcat II 5110 (AGP Pro 4X)	224085-B21
<b>Diskette Drives</b>	250-MB ATAPI ZIP (carbon)	294416-B22
	250-MB ATAPI ZIP Media 3-Pack	217896-B21
<b>Tape Drives</b>	TR5 10/20-GB	294243-B22
	TR5 10/20-GB Media 3-pack	125782-B21
	33/66GB VXA-1 IDE	237109-B22
	33/66GB VXA-1 SCSI	237108-B22
	33/66GB VXA-1 Media 2-pack	237111-B21
	VXA-1 Cleaning Cartridge	237110-B21

### Options

<b>Hard Drives</b>	<i>Ultra3 (Ultra160) SCSI Drives</i>		
	72-GB Ultra160 SCSI 10,000 rpm	250023-B21	
	36.4-GB Ultra160 SCSI 10,000 rpm	191189-B21	
	36.4-GB Ultra 160 SCSI 15,000 rpm	250022-B21	
	18.2-GB Ultra160 SCSI 15,000 rpm	191188-B21	
	18.2-GB Ultra160 SCSI 10,000 rpm	159764-B21	
	<i>Ultra ATA Drives</i>		
	120-GB Ultra ATA 7200 rpm Quiet Seek and Quiet Idle	250021-B21	
	80-GB Ultra ATA 7200 rpm Quiet Seek and Quiet Idle	250020-B21	
	60-GB Ultra ATA 7200 rpm Quiet Seek and Quiet Idle	230253-B21	
	40-GB Ultra ATA 7200 rpm Quiet Seek and Quiet Idle	201066-B21	
	20-GB Ultra ATA 7200 rpm Quiet Seek	176272-B21	
	<b>Storage Controllers</b>	Adaptec 29160N Ultra160 Single Channel SCSI Controller	157810-B21
		Adaptec 2100S Ultra 160 (U3) Single Channel RAID Controller	192842-B21
5 Device SCSI Cable		230777-B21	
<b>Biometrics</b>	USB Biometric FIT Device (Carbon)	240238-B21	
<b>Multimedia</b>	48X CD-ROM (carbon)	187217-B22	
	16X/10X/40X CD-RW Drive (carbon)	240598-B22	
	16X/40X DVD-ROM (carbon, without MPEG2 decoder)	237495-B22	
	12X/8X/32X CD-RW Drive (carbon)	217682-B22	
	8X Combo CD-RW/DVD-ROM (carbon)	244885-B22	
	4.7-GB DVD-RAM Drive (carbon)	294415-B22	
	4.7-GB DVD RAM (Single Sided) Media Kit	211082-B21	
	Labtec Spin-22 Carbon Speakers	246637-001	
	Compaq Digital Video (DV) Option Kit	229966-B21	
	IEEE 1394 PCI Card with Adobe Premiere 6.0		
	4.7-GB DVD-RW drive (carbon)	246625-B22	
	4.7-GB DVD-RAM (Single Sided) Media Kit	211082-B21	
<b>Communications</b>	Compaq NC3123 Fast Ethernet NIC PCI 10/100 WoL	174830-B21	
	Compaq NC3134: 64 PCI, Dual Base 10/100 WoL	138603-B21	
	Compaq NC3135: 10/100 Dual Upgrade Module (for NC3134)	138604-B21	
	Compaq NC6134: Gbit NIC 64 PCI 1000SX	174818-B21	
	Compaq NC6136 Fiber Gbit NIC	203539-B21	
	Compaq NC7131 Gigabit Server Adapter PCI (64/44 10/100/1000-T)	158575-B21	
	Lucent V.90 56K PCI Win Modem	239137-B21	
	Intel Pro/100+Management Adapter w/IP Security (Single Pack)	212953-B21	
	Intel Pro/100+Management Adapter w/IP Security (20 Pack)	212954-B21	
<b>Uninterruptible Power Systems</b>	Compaq Tower UPS Model T1500 (low voltage)	242688-003	
	Compaq Tower UPS Model T1000 (low voltage)	242688-001	
	Compaq Tower UPS Model T700 (low voltage)	295372-B21	

### Options

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<b>Other</b>	Compaq Scroll Mouse (carbon)	170299-B22
	3 Button Mouse (carbon)	269192-B23
	Compaq Easy Access Keyboard (Carbon)	202109-008
	External SCSI Adapter 68-/50-Pin	270187-B21
	Sliding Shelf Kit	332564-B21
	5 Device LVD/SE Cable Kit	230777-B21
	Spaceball 4000 3D Motion Controller (Carbon)	112138-B22
	Rack Fixed Shelf	303606-B21
	Depth Adjustable Rails	332558-B21
<b>Support Software CD</b>	Single CD-ROM (current month)	272505-001

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### Memory

#### Compaq Evo Workstation W6000

##### STANDARD MEMORY

256-MB of 800-MHz ECC RDRAM is standard. Memory must be installed in like pairs. (Only 800-MHz memory speed is supported.)

##### STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1280 MB of 800-MHz ECC RDRAM is available with the installation of optional Memory Kits. Memory must be installed in like pairs.

##### STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

Support for up to 2 GB of 800-MHz ECC RDRAM is available with the removal of the standard 128-MB RDRAM modules and the installation of optional 512MB 800-MHz ECC RDRAM Kits. Memory must be installed in like pairs

**Note:** This chart does not represent all possible memory configurations. Memory must be installed in like pairs. Option kits contain one memory module.

Memory		Memory Channel A		Memory Channel B	
		XMM1	XMM2	XMM3	XMM4
Standard	256 MB	128 MB	CRIMM	128 MB	CRIMM
Optional	512 MB	128 MB	128 MB	128 MB	128 MB
Optional	768 MB	128 MB	256 MB	128 MB	256 MB
Maximum	1024 MB	256 MB	256 MB	256 MB	256 MB
Maximum	2048 MB	512 MB	512 MB	512 MB	512 MB

Following are memory options available from Compaq:

- 512-MB Memory Kit (800 MHz ECC RDRAM) 103996-B21
- 256-MB Memory Kit (800 MHz ECC RDRAM) 157341-B21
- 128-MB Memory Kit (800 MHz ECC RDRAM) 157338-B21



### Memory

#### Compaq Evo Workstation W6000

##### STANDARD MEMORY

512-MB of 800-MHz ECC RDRAM is standard. Memory must be installed in like pairs. (Only 800-MHz memory speed is supported.)

##### STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1536 MB of 800-MHz ECC RDRAM is available with the installation of optional ECC RDRAM Kits. Memory must be installed in like pairs.

##### STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

Support for up to 2 GB of 800-MHz ECC RDRAM is available with the removal of the standard 128-MB RDRAM modules and the installation of optional 512MB 800-MHz ECC RDRAM Kits. Memory must be installed in like pairs.

**Note:** This chart does not represent all possible memory configurations. Memory must be installed in like pairs. Option kits contain one memory module.

Memory		Memory Channel A		Memory Channel B	
		XMM1	XMM2	XMM3	XMM4
Standard	512 MB	256 MB	CRIMM	256 MB	CRIMM
Optional	1024 MB	256 MB	256 MB	256 MB	256 MB
Optional	2048 MB	512 MB	512 MB	512 MB	512 MB

Following are memory options available from Compaq:

- 512-MB Memory Kit (800 MHz ECC RDRAM) 103996-B21
- 256-MB Memory Kit (800 MHz ECC RDRAM) 157341-B21
- 128-MB Memory Kit (800 MHz ECC RDRAM) 157338-B21

### Memory

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#### Compaq Evo Workstation W6000

##### STANDARD MEMORY

1 GB of 800-MHz ECC RDRAM is standard. Memory must be installed in like pairs. (Only 800-MHz memory speed is supported.)

##### STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 2 GB of ECC RDRAM. Memory must be installed in like pairs.

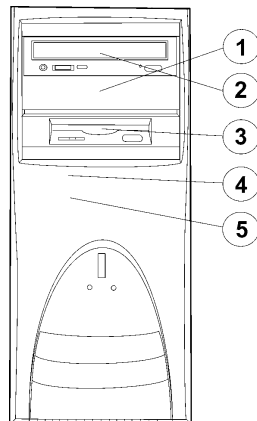
**Note:** This chart does not represent all possible memory configurations. Memory must be installed in like pairs. Option kits contain one memory module.

Memory		Memory Channel A		Memory Channel B	
		XMM1	XMM2	XMM3	XMM4
Standard	1024 MB	512 MB	CRIMM	512 MB	CRIMM
Optional	2048 MB	512 MB	512 MB	512 MB	512 MB

Following are memory options available from Compaq:

- 512-MB Memory Kit (RDRAM RIMM, 800 MHz) 103996-B21
- 256-MB Memory Kit (RDRAM RIMM, 800 MHz) 157341-B21
- 128-MB Memory Kit (RDRAM RIMM, 800 MHz) 157338-B21

## Storage



### DRIVE SUPPORT

	Quantity Supported	Position Supported	Controller
<b>Removable Media</b>			
1.44-MB Diskette Drive	Up to 1	1, 2, 3	Integrated
CD-ROM Drive	Up to 1	1, 2	Integrated EIDE
250-MB ATAPI ZIP Drive	Up to 1	1, 2	Integrated EIDE
16X/40X DVD-ROM Drive	Up to 1	1, 2	Integrated EIDE
16X/10X/40X CD-RW Drive	Up to 1	1, 2	Integrated EIDE
8X Combo CD-RW/DVD-ROM	Up to 1	1, 2	Integrated EIDE
TR5 10/20-GB tape drive	Up to 1	1, 2	Integrated EIDE
33/66GB VXA-1 tape drive	Up to 1	1, 2	Integrated EIDE
4.7-GB DVD-RAM Drive	Up to 1	1, 2	Integrated EIDE
<b>Hard Drives</b>			
<i>Ultra3 (Ultra160) SCSI Drives</i>			
<b>1-inch</b>	Up to 3	1, 2, 3, 4, 5	Integrated Ultra160 SCSI Controller
72-GB 10,000 rpm			
36.4-GB 10,000 rpm			
36.4-GB 15,000 rpm			
18.2-GB 15,000 rpm			
18.2-GB 10,000 rpm			
<i>Ultra ATA Drives</i>			
<b>1-inch</b>	Up to 3	1, 2, 3, 4, 5	Integrated EIDE
20-GB 7200 rpm			
40-GB 7200 rpm			
60-GB 7200 rpm			
80-GB 7200 rpm			
120-GB 7200 rpm			
<b>Maximum Storage Capacity</b>			
Internal	360 GB (assumes two removable media drives installed)		

### Technical Specifications

<b>System Unit</b>	<b>Tower Dimensions (HxWxD)</b>	17.65 x 6.6 x 17.61 in/44.83 x 16.76 x 44.73 cm	
	<b>Weight (standard configuration)</b>	26 lbs/12 kg	
	<b>Power Supply</b>	Operating Voltage Range	90 VAC to 264 VAC
		Rated Voltage Range	100 VAC to 120 VAC; 200 VAC to 240 VAC
		Rated Line Frequency	50 Hz to 60 Hz
		Rated Input Current	8.6A @ 115 VAC; 4.3A @ 230 VAC
		Maximum Rated Power	460-Watt output
		Physical Dimensions	5.9 x 3.85 x 6.3 in/15 x 9.8 x 16 cm
		Weight	4.5 lbs/2.05 kg
	<b>Temperature (Values are subject to change)</b>	Operating	50° to 95°F/10° to 35°C
		Non-operating	4° to 140°F/-15° to 60°C
	<b>Humidity (non-condensing) (Values are subject to change)</b>	Operating	20% to 80%
		Non-operating	10% to 90%
<b>Maximum Altitude (nonpressurized)</b>	Operating	10,000 ft/3,048 m	
	Non-operating	30,000 ft/9,144 m	
<b>Compaq Easy Access Keyboard</b>	<b>Dimensions (HxWxD)</b>	18.3 x 6.3 x 1.4 in/465 x 160 x 36 mm	
	<b>Weight</b>	Approximately 2 lbs/0.9 kg	
	<b>Electrical</b>	Operating Voltage	+5VDC ± 5%
		Power Consumption	50 mA maximum (with 3 LEDs on)
		System Interface	PS/2 mini-din connector
		ESD	CE level 4, 15 kV air discharge
		EMI-RFI	Conforms to FCC rules for a Class B computing device
		PC98	Functionally compliant
	<b>Mechanical</b>	Languages	30+ available
		Keycaps	Low-profile design
		Switch Actuation	55 g nominal peak force with tactile feedback
		Switch Life	20 million keystrokes (using Hasco modified tester)
		Switch Type	Contamination resistant membrane
		Key Leveling Mechanism	For all double wide and greater length keys
		Cable Length	6 ft/1.8 m
		PC98-99	Mechanically compliant
		Acoustics	50 dBA maximum sound pressure level
	<b>Environmental</b>	Operating Temperature	50° to 122° F/10° to 50° C
		Non-operating Temperature	-22° to 140° F/-30° to 60° C
Operating Humidity		10% to 90% (non condensing at ambient)	
Non-operating Humidity		20% to 80% (non condensing at ambient)	
Operating Shock		40 g, 6 surfaces	
Non-operating Shock		80 g, 6 surfaces	
Operating Vibration		2 g peak acceleration	
Non-operating Vibration		4 g peak acceleration	

### Technical Specifications

<b>1.44-MB Diskette Drive</b>	<b>Diskette Size</b>	3.5 in		
	<b>LED Indicators (front panel)</b>	Green		
	<b>Read/Write Capacity per Diskette (high/low)</b>	1.44 MB/720 KB		
	<b>Drive Height</b>	One-third		
	<b>Drive Rotation</b>	300 rpm		
	<b>Transfer Rate (high/low)</b>	500/250 Kb/s		
	<b>Bytes/Sector</b>	512		
	<b>Sectors/Track (high/low)</b>	18/9		
	<b>Tracks/Side (high/low)</b>	80/80		
	<b>Access Times</b>	Track-to-Track (high/low)	3/6 ms	
		Average (high/low)	94/173 ms	
		Settling Time	15 ms	
		Latency Average	100 ms	
<b>Cylinders (high/low)</b>	80/80			
<b>Read/Write Heads</b>	Two			
<b>Compaq 3-Button Mouse</b>	<b>Dimensions/Weight</b>	Height	1.42 in/3.6 cm	
		Length	4.17 in/10.7 cm	
		Width	2.87 in/7.4 cm	
		Weight	5.20 oz/150 g	
	<b>Environmental</b>	Operating Temperature	32° to 104° F/0°C to 40° C	
		Non-operating Temperature	-4° to 140° F/-20° to 60°C	
		Operating Humidity	10% to 90% (non condensing at ambient)	
	<b>Mechanical</b>	Resolution	400 ± 20% DPI	
		Tracking Speed	10 in/s Maximum	
		Switch Life	1,000,000 operations (using Hasco modified tester)	
		Switch Type	Micro-switches	
		Tracking Mechanism Life	155 miles/250 km at average speed of 10 in/s	
		Cable Length	6 ft/1.8 m	
		PC98-99	Mechanically compliant	
	<b>Regulatory Approvals</b>	Compliant	UL, CSA, FCC, CE Mark, TUV, TUV GS, VCCI, BSMI, C-Tick	

### Technical Specifications

Ultra160 SCSI Hard Drives	72 GB	<b>Capacity</b>	72,000 MB
	250023-B21	<b>Height</b>	1.0 in/40.64 mm
		<b>Width</b>	3.5 in/88.9 mm
		<b>Interface</b>	Ultra160 SCSI
		<b>Synchronous Transfer Rate (Maximum)</b>	160 MB/s
		<b>Seek Time (typical reads, including settling)</b>	Single Track 0.6 ms
			Average 5.2 ms
			Full-Stroke 12 ms
			Rotational Speed 10,000 rpm
		<b>Logical Blocks</b>	142,264,000
	<b>Operating Temperature</b>	50° to 95°F/10° to 35°C	
36.4 GB	191189-B21	<b>Capacity</b>	36,400 MB
		<b>Height</b>	1.0 in/25.4 mm
		<b>Width</b>	3.5 in/88.9 mm
		<b>Interface</b>	Ultra160 SCSI
		<b>Synchronous Transfer Rate (Maximum)</b>	160 MB/s
		<b>Seek Time (typical reads, including settling)</b>	Single Track 0.6 ms
			Average 4.7 ms
			Full-Stroke 12 ms
			Rotational Speed 10,000 rpm
		<b>Logical Blocks</b>	71,132,000
	<b>Operating Temperature</b>	50° to 95°F/10° to 35°C	
36.4 GB	250022-B21	<b>Capacity</b>	36419.2 MB
		<b>Height</b>	1 in/25.4mm
		<b>Width</b>	4.0in/101.6mm
		<b>Interface</b>	Wide Ultra3 SCSI
		<b>Transfer Rate Synchronous (Maximum)</b>	160 MB/s
		<b>Seek Time (typical reads, including settling)</b>	Single Track 0.4 ms
			Average 3.8 ms
			Full-Stroke 7 ms
			Rotational Speed 15,000 rpm
		<b>Physical Configuration</b>	Bytes/Sector 512
		Logical Blocks 71,132,000	
	<b>Operating Temperature</b>	50° to 95°F/10° to 35°C	
18.2 GB	191188-B21	<b>Capacity</b>	18,209 MB
		<b>Height</b>	1 in/25.4 mm
		<b>Width</b>	3.5 in/88.9 mm
		<b>Interface</b>	Ultra160 SCSI
		<b>Synchronous Transfer Rate (Maximum)</b>	160 MB/s
		<b>Seek Time (typical reads, including settling)</b>	Single Track 0.8 ms
			Average 4.1 ms
			Full-Stroke 7.7 ms
			Rotational Speed 15,000 rpm
		<b>Logical Blocks</b>	35,566,000
	<b>Operating Temperature</b>	50° to 95°F/10° to 35°C	

## Technical Specifications

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<b>Ultra160 SCSI Hard Drives</b> <i>(continued)</i>	<b>18.2 GB</b>	<b>Capacity</b>	18,209 MB
	<b>159764-B21</b>	<b>Height</b>	1 in/25.4 mm
		<b>Width</b>	3.5 in/88.9 mm
		<b>Interface</b>	Ultra160 SCSI
		<b>Synchronous Transfer Rate</b> (Maximum)	160 MB/s
		<b>Seek Time</b> (typical reads, including settling)	Single Track      0.6 ms Average            4.7 ms Full-Stroke        12 ms
			Rotational Speed    10,000 rpm
		<b>Logical Blocks</b>	35,566,000
		<b>Operating Temperature</b>	50° to 95°F/10° to 35°C

## Technical Specifications

<b>Ultra ATA Hard Drives</b>	<b>120 GB</b>	<b>Capacity</b>	120,000 MB	
	<i>250021-B21</i>	<b>Height</b>	1 in/25.4 mm	
		<b>Width</b>	3.5 in/88.9 mm	
		<b>Interface</b>	Ultra ATA/100	
		<b>Synchronous Transfer Rate (Maximum)</b>	100 MB/s	
		<b>Seek Time</b> (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)
			Average	8.0 ms (14.3 ms quiet seek)
			Full-Stroke	18.0 ms (24.1 ms quiet seek)
			<b>Rotational Speed</b>	7200 rpm
		<b>Logical Blocks</b>	234,441,648	
	<b>Operating Temperature</b>	41° to 131°F (5° to 55°C)		
	<b>80 GB</b>	<b>Capacity</b>	80,000 MB	
	<i>250020-B21</i>	<b>Height</b>	1 in/25.4 mm	
		<b>Width</b>	3.5 in/88.9 mm	
		<b>Interface</b>	Ultra ATA/100	
		<b>Synchronous Transfer Rate (Maximum)</b>	100 MB/s	
		<b>Seek Time</b> (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)
			Average	8.0 ms (14.3 ms quiet seek)
			Full-Stroke	18.0 ms (24.1 ms quiet seek)
			<b>Rotational Speed</b>	7200 rpm
		<b>Logical Blocks</b>	157,278,240	
	<b>Operating Temperature</b>	41° to 131°F (5° to 55°C)		
	<b>60 GB</b>	<b>Capacity</b>	60,000 MB	
	<i>230253-B21</i>	<b>Height</b>	1 in/25.4 mm	
		<b>Width</b>	3.5 in/88.9 mm	
		<b>Interface</b>	Ultra ATA/100	
		<b>Synchronous Transfer Rate (Maximum)</b>	100 MB/s	
		<b>Seek Time</b> (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)
			Average	8.0 ms (14.3 ms quiet seek)
			Full-Stroke	18.0 ms (24.1 ms quiet seek)
			<b>Rotational Speed</b>	7200 rpm
		<b>Logical Blocks</b>	117,231,408	
	<b>Operating Temperature</b>	41° to 131°F/5° to 55°C		



## Technical Specifications

Ultra ATA Hard Drives (continued)	40 GB	<b>Capacity</b>	40,000 MB	
	201066-B21	<b>Height</b>	1 in/25.4 mm	
		<b>Width</b>	3.5 in/88.9 mm	
		<b>Interface</b>	Ultra ATA	
		<b>Synchronous Transfer Rate (Maximum)</b>	100 MB/s	
		<b>Seek Time</b> (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)
			Average	8 ms (10.1 ms quiet seek)
			Full-Stroke	18.0 ms (21.1 ms quiet seek)
			<b>Rotational Speed</b>	7200 rpm
		<b>Logical Blocks</b>	78,165,360	
		<b>Operating Temperature</b>	41° to 131°F/5° to 55°C	
<hr/>				
	20 GB	<b>Capacity</b>	20,000 MB	
	176272-B21	<b>Height</b>	1 in/25.4 mm	
		<b>Width</b>	3.5 in/88.9 mm	
		<b>Interface</b>	Ultra ATA	
		<b>Synchronous Transfer Rate (Maximum)</b>	100 MB/s	
	<b>Seek Time</b> (typical reads, including settling)	Single Track	1.2 ms (2.7 ms quiet seek)	
		Average	8 ms (10.1 ms quiet seek)	
		Full-Stroke	18.0 ms (21.1 ms quiet seek)	
		<b>Rotational Speed</b>	7200 rpm	
	<b>Logical Blocks</b>	39,102,336		
	<b>Operating Temperature</b>	41° to 131°F/5° to 55°C		

### Technical Specifications

<b>48X CD-ROM Drive</b>	<b>Disk</b>	<b>Applicable Disk</b>	CD-ROM (Mode 1 and 2), CD-R/W, CD-R Photo CD (Single and Multi-session), Mixed Mode (Audio and Data combined), CDI Ready, CD-XA Ready, CD TEXT, CD EXTRA
		<b>Capacity</b>	540 MB (Mode 1, 12 cm) 650 MB (Mode 2, 12 cm)
		<b>Rotational Speed</b>	8750 maximum
		<b>Diameter</b>	4.7 in, 3.15 in/12 cm, 8 cm
		<b>Center Hole</b>	0.6 in/15 mm diameter
		<b>Thickness</b>	0.05 in/1.2 mm
		<b>Track Pitch</b>	1.6 $\mu$ m
		<b>Block Size</b>	Mode 1 Mode 2 CD-DA CD-XA
	<b>Interface</b>	IDE	
	<b>Access Times (typical)</b>	Random Full-Stroke	< 100 ms < 150 ms
	<b>Audio Output Level</b>	Line-Out	0.7 VRMS
	<b>Data Transfer Rate</b>	Sustained Variable	150 KB/s (1X, using audio disc) 3,000 to 7,200 KB/s
	<b>Cache Buffer</b>	128 KB minimum	
	<b>Start-up Time (typical)</b>	< 7 s	
	<b>Stop Time</b>	< 4 s	
	<b>Operating Conditions</b>	Temperature Humidity	41° to 113°F/5° to 45°C 10% to 80%
	<b>Dimensions</b>	(HxWxD, maximum) Weight	1.7 x 5.9 x 8.19 in/4.29 x 15 x 20.8 cm 2.65 lbs/1.2 kg

### Technical Specifications

16X/10X/40X CD-RW Drive	<b>Interface</b>	ATAPI IDE		
	<b>Media formats written</b>	CD-R and CD-RW		
	<b>Media capacity</b>	650 MB		
	<b>Write methods</b>	Disc-at-once, track-at-once, session-at-once, fixed packet, and variable packet		
	<b>Recording/playing time</b>	74 minutes		
	<b>Data transfer rates</b>	Sustained	CD-R write—2,400 Kbps (16X) CD-RW write (1-4X media) —1,500 Kbps (4X) CD-RW write (4-10X media) —1,500 Kbps (10X) CD-RW read—1,500 Kbps (10X) Digital audio extraction (minimum) —1,500 Kbps (10X)	
		Variable	CD-ROM, CD-R read—1,500 to 6,000 Kbps (10X to 40X)	
	<b>Data transfer modes</b>	ATA PIO mode 4—16.7 Mbps ATA multi-word DMA mode 2—16.7 Mbps ATA UltraDMA mode 0—16.7 Mbps (mandatory and default setting) ATA UltraDMA mode 1—24 Mbps (optional); mode 2—33 Mbps (optional)		
	<b>Media formats read</b>	CD-audio, CD-ROM (modes 1 and 2), CD-ROM XA (mode 2, forms 1 and 2), single- or multi-session photo CD, CD-I, video CD, CD-text		
		Access times	Random	< 20 ms typical
			Full stroke	< 200 ms typical
	<b>Rotational speed</b>	17X-40X CAV	8,350 RPM (constant)	
		16X CLV	3,424-7,952 RPM	
		10X CLV	2,140-4,970 RPM	
	8X CLV	1,712-3,976 RPM		
	4X CLV	856-1,988 RPM		
<b>Start-up time</b>	Single	< 7 seconds typical		
	Multi-session	< 30 seconds typical		
	Stop time	< 4 seconds		
	Block size	Mode 1—2,048/2,352 bytes Mode 2, Form 1—2,048/2,328/2,336/2,340/2,352 bytes Mode 2, Form 2—2,328/2,336/2,340/2,352 bytes CD-DA—2,352/2,368 bytes		
<b>Disc diameter</b>	120 mm or 80 mm			
<b>Track pitch</b>	1.6 µm			
<b>Disc loading mechanism</b>	Half-height, tray load			
<b>Operating conditions</b>	Temperature	5° to 45° C (41° to 113° F) operating		
	Humidity	10% to 80%		

### Technical Specifications

<b>16X/10X/40X CD-RW Drive</b> <i>(continued)</i>	<b>Mounting orientation</b>	Horizontal or vertical
	<b>Dimensions</b>	Fits in a standard 5.25-inch drive bay
	<b>Weight</b>	1.2 kg (2.6 pounds)
	<b>Approvals/ environmental</b>	UL 94 and 1950, CSA, CE, FDA, FCC
	<b>Operating systems supported</b>	Microsoft Windows 98, Microsoft Windows NT 4.0, Microsoft Windows 2000, Microsoft WindowsXP Professional
	<b>Kit contents</b>	16X CD-R media, CD-RW high-speed media, Roxio™ EasyCD Creator, Dantz Retrospect Express Backup for CD-RW, IDE cable (opal kit), audio cable

### Technical Specifications

4.7-GB DVD-RAM Drive	<b>Type</b>	Internal mounting		
	<b>Total capacity</b>	DVD-RAM	4.7 GB (per-side capacity) and 2.6 GB (per-side capacity)	
	<b>Data transfer rate</b>	DVD-RAM (read)	2,770 Kbps (4.7 GB) 1,385 Kbps (2.6 GB)	
		DVD-RAM (write)	1,385 Kbps (4.7 GB) with "write verify" enabled 695 Kbps (2.6 GB)	
		DVD-ROM and DVD-R	3,438 to 8,310 Kbps (maximum 6X)	
		CD-ROM	1,520 to 3,600 Kbps (maximum 24X)	
	<b>Burst transfer rate</b>	33.3 Mbps maximum (Ultra DMA 33)		
	<b>Interface</b>	Enhanced IDE (ATAPI)		
	<b>Bus speed</b>	Ultra DMA 33		
	<b>Average seek time</b>	DVD-RAM	75 ms	
		DVD-ROM	65 ms	
		CD-ROM	65 ms	
	<b>Access time (random)</b>	DVD-RAM	< 155 ms	
		DVD-ROM	< 135 ms	
		CD-ROM	< 135 ms	
	<b>Buffer capacity</b>	1 MB (minimum)		
	<b>Dimensions</b>	Drive (HxWxD)	1.67 x 5.83 x 8.18 inches (4.23 x 14.81 x 20.75 cm)	
		Weight	2.65 pounds (1.20 kg)	
	<b>Compatible disc formats</b>	DVD-RAM (read/write)	4.7 GB (per-side capacity) and 2.6 GB (per-side capacity); may be used with or without case	
		DVD-ROM (read only)	DVD-ROM (single- or dual-layer, single- or double-sided)	
		DVD-video (read only)	DVD-video	
		DVD-R (read only)	3.9 GB (per side)	
		CD-ROM (read only)	CD-ROM, CD-R, CD-RW, CD-ROM XA, CD-I, CD-audio (CD-DA), photo CD multi-session, video CD	
	<b>Operating and storage conditions</b>	Ambient temperature (operating)	41° to 113° F/5° to 45° C	
		Relative humidity (operating)	10% to 85% relative humidity	
		Mounting/operational orientation	Operates in horizontal or vertical position	
	<b>Kit contents</b>	DVD-RAM drive, single-sided 4.7-GB DVD-RAM media, InterVideo™ WinDVD 2000, Software Architects WriteDVD!™ software, IDE cable, audio cable, installation guide, user guide, warranty card		
<b>Operating system support</b>	Microsoft Windows 98/98 SE, Microsoft Windows 2000, Microsoft Windows XP Professional, and Microsoft Windows NT 4.0 <b>Note:</b> MPEG video playback is not supported on Microsoft Windows NT.			

### Technical Specifications

<b>8X Combo CD-RW/DVD-ROM</b>	5.25-inch, half-height, tray-load	
<b>Orientation</b>	Either horizontal or vertical	
<b>Interface type</b>	ATAPI	
<b>Dimensions—external, excluding bezel (W x H x D)</b>	5.8 x 1.7 x 7.7 inches (146.5 x 42.1 x 196 mm)	
<b>Disc diameter</b>	5 inches, 3 inches (12 cm, 8 cm)	
<b>Disc thickness</b>	0.05 inch (1.2 mm)	
<b>Track pitch</b>	1.6 $\mu$ m (CD), 0.74 $\mu$ m (DVD)	
<b>Disc center hole diameter</b>	0.6 inch (15 mm)	
<b>Reference scanning velocity</b>	1.2 m/s (CD); 3.5 m/s (DVD SL); 3.8 m/s (DVD DL)	
<b>Read only disc parameters</b>	<b>Formats and modes supported</b>	CD-ROM—Mode 1; CD-ROM XA—Mode 2 (forms 1 and 2); CD digital audio; CD Extra; CD-I—Mode 2 (forms 1 and 2) and CD-I-Ready; Photo CD (single and multi-session); video CD; DVD (single- and double-layer); DVD-R (3.95-GB); DVD-R (4.7-GB)
	<b>Capacity</b>	540 MB (CD— mode 1, 12 cm); 650 MB (CD—mode 2, 12 cm); 700MB (CD-ROM—80 minutes); 180 MB (CD-ROM—8 cm); 4.7 GB (DVD-5); 8.5 GB (DVD-9); 9.4 GB (DVD-10)
	<b>Block size</b>	Mode 1—2,048 and 2,352 bytes; mode 2, form 1—2,048, 2,328, 2,336, 2,340 and 2,352 bytes; mode 2, form 2—2,328, 2,336, 2,340 and 2,352 bytes; CD-DA—2,352 and 2,368 bytes; DVD—2,048 bytes
<b>Writeable disc parameters</b>	<b>Disc type</b>	CD-R and CD-RW
	<b>Write methods</b>	Disc at Once, Track at Once, Session at Once, Variable Packet, Fixed Packet
	<b>Format and modes supported</b>	CD-ROM (mode 1); CD-ROM XA (mode 2, forms 1 and 2); CD digital audio, CD-I (mode 2, forms 1 and 2); video CD
	<b>Capacity</b>	540 MB (mode 1, 12 cm); 650 MB (mode 2, 12 cm); 700 MB (CD-ROM, 80 minutes); 180 MB (CD-ROM, 8 cm)
	<b>Block size</b>	Mode 1 Disc type—2,048 bytes; mode 2, form 1—2,048 and 2,352 bytes; mode 2, form 2—2,352 bytes; CD-DA—2,352 bytes

### Technical Specifications

<b>8X Combo CD-RW/DVD-ROM</b> (continued)	<b>Access times</b> (typical reads, including settling)	Random	< 130 ms (typical)
		Full stroke	< 240 ms (typical)
	<b>Data transfer rates</b>	Sustained—1,200 KB/s (8X)	CD-R write
		Sustained— 600 KB/s (4X)	CD-RW
		Sustained—1,200 KB/s (8X CAV)	Digital audio extraction (minimum)
		Variable—1,500 to 4,800 KB/s (10X to 32X)	CD-ROM, CD-R read, CD-RW read
		Variable—2,705 to 10,820 KB/s (2X to 8X)	DVD read
	<b>Data transfer modes</b>	ATA PIO mode 4 (16.7 Mbps; ATA Multi-word DMA mode 2 (16.7 Mbps); ATA UltraDMA mode 0 (16.7-Mbps—default setting if UDMA supported); ATA UltraDMA mode 1 (24 Mbps, optional), mode 2 (33 Mbps, optional)	
		Cache buffer	2 MB (minimum)
		Startup time (single)	< 7 seconds (typical)
		Startup time (multi-session)	< 30 seconds (typical)
		Stop time	< 4 seconds
<b>Power</b>	Source	Four-pin, DC power receptacle	
	DC power requirement	5 VDC $\pm$ 5%—100 mV ripple p-p	
		12 VDC $\pm$ 5%—200 mV ripple p-p	
	DC current	5 VDC (< 1 A typical, < 1.5 A maximum)	
12 VDC (< 1 A typical, < 1.5 A maximum)			
Total drive power (standby mode)	< 2.5 watt		
<b>Audio output level</b>	0.7 Vrms (typical)		
<b>Configuration jumper block</b>	Master, slave, and cable select modes		
<b>Data interface connector</b>	40-pin, shrouded and keyed, flat ribbon		
<b>Environmental</b> (all conditions non-condensing)	<b>Temperature</b> (operating)	41° to 113°F (5° to 45°C)	
	<b>Relative humidity</b> (operating)	10% to 85%	
	<b>Maximum wet bulb temperature</b> (operating)	86°F (30°C)	
<b>Certifications, requirements</b>	MPC-3 compliant, multi-read requirements, PC'99 certified, ACA AS/NZS 3548, ANSI C63.4-1992, ATAPI Spec SFF-8020, ATA Spec X3T9.2791D, Australian Communications Authority, CB Bulletin No. 92A1, CFR 21, Part 1040, CSA C22.2 No. 950, C.I.S.P.R. Pub 22, ECMA 74, EEC/93/68, EEC/73/23, EEC/99/5, EMKO-TSE (74SEC) 207/94		
<b>Operating systems supported</b>	Microsoft Windows 98, Microsoft Windows NT 4.0, Microsoft Windows 2000, and Microsoft WindowsXP Professional <b>Note:</b> MPEG video playback is not supported on Microsoft Windows NT.		
<b>Option kit contents</b>	8X Combo CD-RW/DVD-ROM Drive, Roxio™ EasyCD Creator, InterVideo™ WinDvd™ 2000, Dantz Retrospect Express for RW, CDR media, CD-RW media, audio cable, and installation guide		

### Technical Specifications

<b>16X/40X DVD-ROM Drive with RAM Read</b>	<b>Bus</b>	Ultra DMA 33	
	<b>Data Transfer Rate</b> (1 KB = 1024 bytes)	Sustained	DVD = 8.1 MB/s to 21.6 MB/s CD-ROM = 2.55 KB/s to 6.00 KB/s
	<b>Disk Rotation Technology</b>		DVD: CAV - Constant Angular Velocity CD: CAV - Constant Angular Velocity
	<b>Access Time (ms)</b>	Random	DVD = <100 ms; CDRom = < 80 ms
		Full Stroke Seek	DVD = <240 ms; CDRom = <160 ms
	<b>Cache Buffer Standard / Max</b>	512 KB	
	<b>ATAPI Interface</b>	ATAPI	
	<b>Disk Formats Read</b>	DVD-ROM	Yes
		DVD-Video	Yes
		DVD-R	Yes
		DVD-RW	Yes
		DVD-RAM	Yes
		Photo-CD/Multi-session	Yes
		CD-ROM	Yes
		CD TEXT	Yes
		Audio CD	Yes
		CD-I	Yes
		CD-RW	Yes
		CD-R	Yes
		CD-DA	Yes
		Video CD	Yes
		CD EXTRA	Yes
		CD-ROM XA	Yes
		MPEG	Yes
		MPC Level 2	Yes
	<b>Disk Formats Written</b>	None	
	<b>Disk</b>	Capacity	CD = 650 MB DVD: 4.7 GB, 8.5 GB, 9.4 GB
		Block Size	Mode 0 2352 (bytes) Mode 1 2352, 2340, 2336, 2048 (bytes) Mode 2 2352, 2340, 2336, 2048 (bytes) DVD – 2048 (bytes)
		Diameter	12 cm, 8 cm
		Thickness	1.2 mm (CD-ROM) 1.2 mm (DVD)



### Technical Specifications

<b>16X/40 DVD-ROM Drive with RAM Read</b> <i>(continued)</i>	<b>Audio Output Level</b>	Line Out	0.7± 0.1 Vrms
		Headphones	0.45 ± 0.2 Vrms
<b>Operating Conditions</b>	Temperature		41° to 113°F/5° to 45°C
	Humidity		5% to 85% relative humidity
<b>Dimensions (HxWxD)</b>	Inches		1.67 x 5.83 x 8.18
	Centimeters		4.23 x 14.8 x 20.75
<b>Weight</b>	Pounds		2.22
	Kilograms		1
<b>Agency Approvals / Environmentals</b>	UL, CSA, TUV, FDA, FCC, CE, EMI		
<b>OS Support</b>	Windows 98/98SE, Windows ME, Windows 2000, Microsoft Windows XP Professional, and Windows NT 4.0 (for data applications only)		
<b>MPEG Video playback compatibility</b>	Please refer to the platform for support		
<b>RPC2 (Regional Protection Control)</b>	Yes		
<b>Minimum CPU Supported</b>	Pentium II 400 MHz or Celeron 466 MHz		
<b>Mounting Orientation</b>	Operates in horizontal or vertical position.		
<b>Kit Contents</b>	DVD-ROM Drive, MPEG playback software, ReadDVD™ software, IDE Cable, audio cable, installation instructions, and warranty card.		

### Technical Specifications

<b>Intel PRO/100 + Management Adapter</b>	<b>Network Interface</b>	10Base-T or 100Base-TX	
	<b>Expansion Bus Architecture</b>	PCI 2.2	
<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s	
	10Base-T (Full-Duplex)	20 Mb/s	
	100Base-TX (Half-Duplex)	100 Mb/s	
	100Base-TX (Full-Duplex)	200 Mb/s	
<b>Connectors</b>	RJ-45		
<b>Standards Compliance</b>	10-Mb/s Ethernet	IEEE 802.3	
	100-Mb/s Ethernet	IEEE 802.3u	
<b>I/O Address</b>	Auto-configured		
<b>Remote Wakeup</b>	Yes		
<b>Operating Temperature</b>	0° to 55°F/10° to 35°C		
<b>Operating Humidity (non-condensing)</b>	85% at 131°F/55°C		
<b>Operating Altitude</b>	10,000 ft/3,048 m		
<b>Communication Processor</b>	Intel 82559		
<b>OS Driver Support</b>	Windows NT 4.0	NDIS 3.0, 4.0 Compliant	
	Windows 95, 98, 2000, XP Pro	NDIS 3.0, 4.0, 5.0 Compliant	
	Novell NetWare Server v. 3.x, 4.x and 5.0	ODI Compliant	
	SunSoft Solaris™	Not supported	
	SCO UnixWare, OpenDesktop, OpenServer	Supported	

### Technical Specifications

<b>NVIDIA Quadro2 Pro Graphics Controller</b>	<b>3D/2D Controller</b>	Integrated Quadro2 Pro 2D/3D 128-bit graphics processor unit (GPU)			
	<b>VGA Controller</b>	Integrated into the Quadro2 Pro GPU			
	<b>Bus type</b>	AGP 4X			
	<b>RAMDAC</b>	350 MHz			
	<b>Memory type</b>	400 MHz 4Mx16DDR-5ns			
	<b>Memory amount</b>	64 MB			
	<b>Memory Speed</b>	400 MHz (DDR)			
	<b>Controller clock speed</b>	250 MHz			
	<b>Color planes</b>	32-bit color buffer			
	<b>Overlay planes</b>	1 16-bit Video overlay plane, software emulation for OpenGL overlay planes			
	<b>Stencil planes</b>	8-bit stencil buffer			
	<b>Alpha planes</b>	8-bit alpha buffer			
	<b>Z-buffer</b>	24-bit			
	<b>Total bits/pixel</b>	64			
	<b>Maximum vertical refresh rate</b>	240 Hz			
	<b>Maximum pixel clock</b>	350 MHz			
	<b>Multi-display support</b>	No			
	<b>Operating systems</b>	Microsoft Windows 2000, Microsoft Windows XP Professional, Windows NT 4.0 available from Compaq			
		<b>Resolution</b>	<b>Maximum Colors Supported</b>	<b>Maximum Refresh Rate</b>	<b>Memory Dedicated to Texture Support</b>
		640 x 480	16.7 M	240 Hz	60.4 MB
		800 x 600	16.7 M	240 Hz	58.4 MB
	1024 x 768	16.7 M	240 Hz	54.8 MB	
	1152 x 864	16.7 M	200 Hz	52.3 MB	
	1280 x 1024	16.7 M	150 Hz	48.6 MB	
	1600 x 1000	64 K	120 Hz	54.6 MB	
	1600 x 1000	16.7 M	120 Hz	45.3 MB	
	1600 x 1200	64 K	100 Hz	52.8 MB	
	1600 x 1200	16.7 M	100 Hz	41.5 MB	
	1600 x 1280	64 K	100 Hz	52 MB	
	1600 x 1280	16.7 M	100 Hz	40 MB	
	1920 x 1080	64 K	85 Hz	51.9 MB	
	1920 x 1080	16.7 M	85 Hz	39.7 MB	
	1920 x 1200	64 K	85 Hz	50.5 MB	
	1920 x 1200	16.7 M	85 Hz	37 MB	

### Technical Specifications

<b>Matrox Millennium G550 AGP Graphics Controller</b>	<b>Form factor</b>	Low profile (LP) board with ATX bracket attached (kit also includes a Small Form Factor (SFF) bracket)	
	<b>Bus type</b>	AGP 4X, AGP 2X, and AGP 1X	
	<b>Standard memory</b>	32-MB, high-speed DDR	
	<b>DAC speed</b>	360-MHz RAMDAC; secondary 230-MHz RAMDAC	
	<b>Data path</b>	64-bit DDR external bus to frame buffer memory/256-bit internal	
	<b>Internal bus width</b>	256-bit DualBus	
	<b>Memory interface</b>	64-bit DDR Memory	
	<b>Frame buffer</b>	32 MB	
	<b>Operating systems supported</b>	Microsoft Windows 2000, Microsoft Windows 98, Microsoft Windows NT 4.0, Microsoft Windows XP Professional	
	<b>Two integrated RAMDACs</b>	Yes	
	<b>3-D engine acceleration</b>	Matrox HeadCasting* engine, two dual-textured 3-D pixels/clock for fast 3-D game play, dual pixel pipelines with dual texturing units per pipeline, floating point 3-D setup engine with dynamically re-allocatable resources; Microsoft DirectX Environment-Mapped Bump Mapping; Vibrant Color Quality rendering; bilinear, 8-sample-per-pixel trilinear, and anisotropic filtering; Microsoft DirectX and OpenGL® alpha blending modes; Z-buffer support	
	<b>3-D features</b>	Single cycle multi-texturing	Yes
		Environment-mapped bump mapping	Yes
		Internal rendering	32-bit
		Source textures	Up to 32-bit
Maximum texture size		2048 x 2048	
32-bit color output		Yes	
32-bit independent Z-buffer		Yes	
Stencil buffering		Yes	
AGP texturing		Yes	
Trilinear filtering		Yes	
Microsoft DirectX support	Yes		
OpenGL support	Yes, through Matrox		
<b>DualHead 3-D display features</b>	HeadCasting, Microsoft DirectX compliant, dual texturing units per pixel pipeline, two pixel pipelines, single-cycle multi-texturing, environment-mapped bump mapping, 32-bit internal rendering precision, up to 32-bit source textures, 32-bit color output, bilinear, trilinear and anisotropic 3-D filtering, 32-bit independent Z-buffer, OpenGL support		
<b>Other 3-D features</b>	Alpha blending, fogging, specular highlighting, environment mapping, stencil buffering, triple buffering, AGP texturing		
<b>Other</b>	Texture mapping support; true color RGB, flat, and Gouraud shading; Direct3-D support; anisotropic filter; perspective-correct texture mapping; specular highlighting (any color); hardware dithering (including dithering of LUT textures); sort-dependent antialiasing; vertex and table fogging; dual texture mapping; Plug-and-Play; 0.18-micron technology (lower heat/power consumption); high-quality DVD playback with DVDMAX; color space conversion; QuickDraw supported DCI and Microsoft DirectX and OpenGL blend modes; Microsoft DirectDraw support; support for picture-in-picture and multiple video windows; Unique Motion Video Rendering support		
<b>Optional software bundles (not included)</b>	Matrox Virtual Presenter for Microsoft PowerPoint; Digimask™ System, HeadFone™ by LipSinc; The Matrox Software DVD Player; eDualHead browser enhancements (PageWrap, PageLog, and PageJump); Matrox PowerDesk		

### Technical Specifications

<b>Matrox Millennium G550 AGP Graphics Controller</b> <i>(continued)</i>	<b>DualHead configurations</b>	VGA monitor/analog flat panel + VGA monitor/analog flat panel VGA monitor/analog flat panel + television Digital flat panel + VGA monitor/analog flat panel Digital flat panel + television
	<b>DualHead 2-D display features</b>	DualHead Multi-Display support; DualHead Browser Enhancement Suite, DualHead DVDMax, DualHead Zoom, DualHead Clone, DVDMax, DualHead MultiDesk, DualHead TV-out, DualHead Snapshot, Dual DVI support, ; True Multi-Display support with Microsoft Windows 2000
	<b>DualHead display technology chip specifications</b>	Multiple independent displays with a single AGP card: analog flat panel (RGB monitor)/analog flat panel (RGB monitor); digital flat panel/digital flat panel

**Note:** System recommendations for HeadCasting and DVD—450-MHz or higher computer; 128 MB RAM; 56-K or higher modem with minimum 40-K connection, microphone, and DVD-ROM; Internet Explorer 5.5 or higher, Microsoft PowerPoint 2000 or Microsoft PowerPoint XP (for Matrox Virtual Presenter)

<b>Resolutions Supported</b>	<b>Maximum Colors Supported</b>	<b>Refresh Rates</b>
640 x 480	16 million	200 Hz vertical, 130 kHz horizontal
800 x 600	16 million	200 Hz vertical, 130 kHz horizontal
1024 x 768	16 million	160 Hz vertical, 130 kHz horizontal
1152 x 864	16 million	150 Hz vertical, 130 kHz horizontal
1280 x 1024	16 million	120 Hz vertical, 130 kHz horizontal
1600 x 1200	16 million	100 Hz vertical, 130 kHz horizontal
1800 x 1440	16 million	90 Hz vertical, 120kHz horizontal
1920 x 1440	16 million	85 Hz vertical, 115 kHz horizontal
2048 x 1536	16 million	85 Hz vertical, 110 kHz horizontal
<b>Secondary Resolutions Supported</b>	<b>Maximum Color Depths (bpp)</b>	<b>Refresh Rates</b>
640 x 480	16 million	200 Hz vertical, 130 kHz horizontal
800 x 600	16 million	200 Hz vertical, 130 kHz horizontal
1024 x 768	16 million	160 Hz vertical, 130 kHz horizontal
1152 x 864	16 million	140 Hz vertical, 130 kHz horizontal
1280 x 1024	16 million	120 Hz vertical, 130 kHz horizontal
1600 x 1200	16 million	100 Hz vertical, 130 kHz horizontal

### Technical Specifications

<b>Matrox Millennium G450 Graphics Controllers</b>	<b>Form Factor</b>	ATX																									
	<b>Bus Type</b>	AGP 1X, 2X, 4X: PCI rev 2.2 bus specification																									
	<b>Standard Memory</b>	AGP: 32 MB / PCI: 16 MB																									
	<b>DAC Speed</b>	360 MHz (secondary DAC: 200 MHz)																									
	<b>Data Path</b>	64-bit DDR External/256-bit Internal																									
	<b>Internal Bus Width</b>	256-bit DualBus																									
	<b>Memory Interface</b>	64-bit DDR Memory																									
	<b>Frame Buffer</b>	AGP: 32 MB / PCI: 16 MB																									
	<b>Two Integrated RAMDACs</b>	Yes																									
	<b>Engine Acceleration</b>	3 ROP bitBLT, line draw, text, color expansion, basic video color conversion and scaling, triangle setup engine																									
	<b>Output</b>	Analog, 2 ports																									
	<b>OS Support</b>	Microsoft Windows 2000, Microsoft Windows XP Professional, Windows 98 and Windows NT 4.0 available from Compaq.																									
	<b>Other</b>	PCI bus mastering, texture mapping support, flat and Gouraud shading, direct 3D support, Anisotropic Filter, perspective texture, specular highlighting, wireframe, dithering, full scene anti-aliasing, vertex fog, dual texture mapping, Plug-and-Play AGP 2X and AGP 4X, 0.18-micron technology (lower heat/power consumption), high-quality DVD playback with full access to Windows, Color Space Conversion, Quick Draw support, DCI and DirectX video playback, MS DirectDraw support																									
	<b>3D Features</b>	<table border="0"> <tr> <td>Single-cycle multi-texturing</td> <td>Yes</td> </tr> <tr> <td>Environment-Mapped Bump Mapping</td> <td>Yes</td> </tr> <tr> <td>Internal Rendering</td> <td>32-bit</td> </tr> <tr> <td>Source Textures</td> <td>Up to 32-bit</td> </tr> <tr> <td>Maximum Texture Size</td> <td>2048 x 2048</td> </tr> <tr> <td>Hardware non-power-of- 2 textures</td> <td>Yes</td> </tr> <tr> <td>32-bit Color Output</td> <td>Yes</td> </tr> <tr> <td>32-bit Independent Z-buffer</td> <td>Yes</td> </tr> <tr> <td>Stencil Buffering</td> <td>Yes</td> </tr> <tr> <td>AGP Texturing</td> <td>Yes</td> </tr> <tr> <td>Trilinear Filtering</td> <td>Yes</td> </tr> <tr> <td>DirectX Support</td> <td>Yes</td> </tr> <tr> <td>OpenGL Support</td> <td>Yes</td> </tr> </table>	Single-cycle multi-texturing	Yes	Environment-Mapped Bump Mapping	Yes	Internal Rendering	32-bit	Source Textures	Up to 32-bit	Maximum Texture Size	2048 x 2048	Hardware non-power-of- 2 textures	Yes	32-bit Color Output	Yes	32-bit Independent Z-buffer	Yes	Stencil Buffering	Yes	AGP Texturing	Yes	Trilinear Filtering	Yes	DirectX Support	Yes	OpenGL Support
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Trilinear Filtering	Yes																										
DirectX Support	Yes																										
OpenGL Support	Yes																										
<b>DualHead Display Features</b>	Multi-Display Mode, DVD Max Mode, DualHead Zoom Mode, DualHead Clone Mode, DualHead TV Output Mode, Single Chip Multi-Monitor Support																										

### Technical Specifications

#### Matrox Millennium G450 Graphics Controllers (continued)

#### Supported Modes

This list assumes setup to be DualHead multi-display running Microsoft Windows 98. If using Windows NT 4.0 or Windows 2000 while in multi-display, primary CRT is limited to modes supported by 2<sup>nd</sup> CRT.

#### Primary CRT Color Depths

640 x 480  
800 x 600  
1024 x 768  
1152 x 864  
1280 x 960  
1280 x 1024  
1600 x 1200

#### Color Depths (bpp)

8, 16, 24, 32  
8, 16, 24, 32  
8, 16, 24, 32  
8, 16, 24, 32  
8, 16, 24, 32  
8, 16, 24, 32  
8, 16, 24, 32

#### Refresh Rates

60 Hz, 72 Hz, 75 Hz, 85 Hz  
60 Hz, 72 Hz, 75 Hz, 85 Hz  
60 Hz, 70 Hz, 75 Hz, 85 Hz  
75 Hz  
60 Hz, 75 Hz, 85 Hz  
60 Hz, 75 Hz, 85 Hz  
60 Hz, 65 Hz, 70 Hz, 75 Hz,  
85 Hz

(available in single monitor  
configuration only)

1800 x 1440  
1856 x 1392  
1920 x 1440  
2048 X 768

8, 16, 24  
8, 16, 24  
8, 16, 24  
8, 16

60 Hz, 72 Hz, 75 Hz, 85 Hz  
60 Hz, 75 Hz, 85 Hz  
60 Hz, 75 Hz, 85 Hz  
60 Hz, 75 Hz

#### Secondary CRT Color Depths

640 x 480  
800 x 600  
1024 x 768  
1152 x 864  
1280 x 960  
1280 x 1024  
1600 x 1200

#### Color Depths (bpp)

16, 32  
16, 32  
16, 32  
16, 32  
16, 32  
16, 32  
16, 32

#### Refresh Rates

60 Hz, 72 Hz, 75 Hz, 85 Hz  
60 Hz, 72 Hz, 75 Hz, 85 Hz  
60 Hz, 70 Hz, 75 Hz, 85 Hz  
75 Hz  
60 Hz, 75 Hz, 85 Hz  
60 Hz, 75 Hz, 85 Hz  
60 Hz, 65 Hz, 70 Hz, 75 Hz,  
85 Hz

### Technical Specifications

<b>Matrox G200 Quad Multi-Monitor Series (MMS) Graphics Controller</b>	<b>Dimensions (HxW)</b>	4.5x8 in/11.43x20.32 cm		
	<b>Refresh Rate (per display)</b>			
	<b>Aspect Ratio</b>	<b>Resolution</b>	<b>Vertical</b>	<b>Horizontal</b>
	4:3/5:4	640 x 480	60 to 200 Hz	31 to 102 kHz
		800 x 600	60 to 200 Hz	38 to 114 kHz
		1024 x 768	60 to 140 Hz	48 to 113 kHz
		1152 x 864	60 to 120 Hz	54 to 110 kHz
		1280 x 1024	60 to 100 Hz	64 to 107 kHz
		1600 x 1200	60 to 90 Hz	75 to 113 kHz
	16:9/16:10	1800 x 1440	60 to 70 Hz	89 to 104 kHz
		856 x 480	60 to 200 Hz	30 to 108 kHz
		1280 x 720	60 to 100 Hz	44 to 76 kHz
		1600 x 1024	60 to 100 Hz	64 to 108 kHz
		1920 x 1080	60 to 80 Hz	70 to 94 kHz
		1920 x 1200	60 to 76 Hz	75 to 95 kHz
With DVI digital flat panel displays, the maximum display resolution is 1280 x 1024. Maximum refresh rates may not be attainable at the highest display resolutions with 24 or 32-bit color palettes.				
<b>Interface</b>	PCI			
<b>Standard Memory</b>	32-MB SGRAM (8 MB per port)			
<b>DAC Speed</b>	250 MHz			
<b>Data Path</b>	128-bit Internal/64-bit External			
<b>Color Space Conversion</b>	Yes			
<b>Scaling</b>	Yes			
<b>Quick Draw Support</b>	Yes			
<b>DCI &amp; DirectX Video Playback</b>	Yes			
<b>Direct3D Support</b>	Yes			
<b>Engine Acceleration</b>	3 ROP bitBLT, Line Draw, Text, Color Expansion, Basic Video Color Conversion and Scaling, Triangle Setup Engine			
<b>Output</b>	Two output ports, which require 2 adapter cables to connect analog or digital output displays			
	Analog Display Support	2 RGB cables support two DB-15 analog displays per cable		
	DVI (Digital Visual Interface) Display Support	DVI cable option kit provides two DVI cables for connecting two DVI compliant displays per cable		
	Display options supported	Four analog displays via two RGB cables Four DVI displays via two DVI cables Two analog displays via one RGB cable and two DVI displays via one DVI cable		
<b>Other</b>	PCI bus-mastering, texture mapping support, flat and Gouraud shading, Anisotropic Filter, perspective texture, specular highlighting, dithering, full scene anti-aliasing, Vertex fog			
<b>OS Support</b>	Windows 2000 (not available for Chinese, Taiwanese, or Korean languages) , MicrosoftWindows XP Professional, and Windows NT 4.0			



### Technical Specifications

<b>NVIDIA Quadro2 MXR Graphics Controller</b>	<b>Dimensions (LxHxW)</b>	Approximately 6.5 x 3.8 x 0.6 in/16.51 x 9.65 x 1.52 cm		
	<b>Resolution</b>	<b>Maximum Colors Supported</b>	<b>Maximum Refresh Rate</b>	<b>Memory Dedicated to Texture Support</b>
	640 x 480	16.7 M	240 Hz	28.4 MB
	800 x 600	16.7 M	240 Hz	26.4 MB
	1024 x 768	16.7 M	200 Hz	22.8 MB
	1152 x 864	16.7 M	170 Hz	20.3 MB
	1280 x 1024	16.7 M	150 Hz	16.6 MB
	1600 x 1000	64 K	120 Hz	22.6 MB
	1600 x 1000	16.7 M	120 Hz	13.3 MB
	1600 x 1200	64 K	100 Hz	20.8 MB
	1600 x 1200	16.7 M	100 Hz	9.5 MB
	1600 x 1280	64 K	100 Hz	20 MB
	1600 x 1280	16.7 M	100 Hz	8 MB
	1920 x 1080	64 K	85 Hz	19.9 MB
	1920 x 1080	16.7 M	85 Hz	7.7 MB
	1920 x 1200	64 K	85 Hz	18.5 MB
	1920 x 1200	16.7 M	85 Hz	5 MB
<b>3D/2D Controller</b>	Integrated Quadro2 MXR 2D/3D 128-bit graphics processor unit (GPU)			
<b>VGA Controller</b>	Integrated into the Quadro2 MXR GPU			
<b>Bus Type</b>	AGP 2X, 4X Graphics Bus			
<b>RAMDAC</b>	350 MHz			
<b>Memory Type</b>	183 MHz SDR 2Mx32			
<b>Memory Amount</b>	32 MB			
<b>Memory Speed</b>	183 MHz			
<b>Controller Clock Speed</b>	200 MHz			
<b>Color Planes</b>	32-bit color buffer			
<b>Overlay Planes</b>	1 16-bit Video overlay plane, software emulation for OpenGL overlay planes			
<b>Stencil Planes</b>	8-bit stencil buffer			
<b>Alpha Planes</b>	8-bit alpha buffer			
<b>Z-buffer</b>	24-bit Z buffer			
<b>Total bits/pixel</b>	64-bits			
<b>Maximum Vertical Refresh Rate</b>	240 Hz			
<b>Maximum Pixel Clock</b>	350 MHz			
<b>Multi-display support</b>	Yes			
<b>Operating Systems</b>	Microsoft Windows 2000, Microsoft Windows XP Professional, Windows NT 4.0 available from Compaq			

### Technical Specifications

NVIDIA Quadro2 EX Graphics Controller	Resolution	Maximum Colors Supported	Maximum Refresh Rate	Memory Dedicated to Texture Support
	640 x 480	16.7 M	120 Hz	28.4 MB
	800 x 600	16.7 M	120 Hz	26.4 MB
	1024 x 768	16.7 M	120 Hz	22.8 MB
	1152 x 864	16.7 M	120 Hz	20.3 MB
	1280 x 1024	16.7 M	100 Hz	16.6 MB
	1600 x 1000	16.7 M	85 Hz	13.3 MB
	1600 x 1200	64 K	100 Hz	20.8 MB
	1600 x 1200	16.7 M	85 Hz	9.5 MB
	1920 x 1080	64 K	85 Hz	19.9 MB
	1920 x 1080	16.7 M	75 Hz	7.7 MB
	1920 x 1200	64 K	85 Hz	18.5 MB
	1920 x 1200	16.7 M	70 Hz	5 MB
<b>Dimensions (LxHxW)</b>	Approximately 6.5 x 2.5 x 0.6 in/16.5 x 6.4 x 1.5 cm			
<b>3D/2D Controller</b>	Integrated Quadro2 EX 2D/3D 128-bit graphics processor unit (GPU)			
<b>VGA Controller</b>	Integrated into the Quadro2 EX GPU			
<b>Bus Type</b>	AGP 2X, 4X			
<b>RAMDAC</b>	350 MHz			
<b>Memory Type</b>	183 MHz SDR 2Mx32			
<b>Memory Amount</b>	32 MB			
<b>Memory Speed</b>	166 MHz			
<b>Controller Clock Speed</b>	175 MHz			
<b>Color Planes</b>	32-bit color buffer			
<b>Overlay Planes</b>	One 16-bit Video overlay plane, software emulation for OpenGL overlay planes			
<b>Stencil Planes</b>	8-bit stencil buffer			
<b>Alpha Planes</b>	8-bit alpha buffer			
<b>Z-buffer</b>	24-bit Z buffer			
<b>Total bits/pixel</b>	64-bits			
<b>Maximum Vertical Refresh Rate</b>	240 Hz			
<b>Maximum Pixel Clock</b>	350 MHz			
<b>Multi-display support</b>	No			
<b>Operating Systems</b>	Microsoft Windows 2000, Microsoft Windows XP Professional, Windows NT 4.0 available from Compaq			

**Note:** All drivers and enhanced software can be found on the Compaq web site at: [www.compaq.com/support/files/workstations/us/index.html](http://www.compaq.com/support/files/workstations/us/index.html).

### Technical Specifications

<b>3Dlabs Wildcat II 5110</b>	<b>Dimensions (LxHxW)</b>	Approximately 13.5 x 3.8 x 1.5 in/ 34.29 x 9.65 x 3.81 cm			
<b>Aspect Ratio</b>	<b>96 bits per pixel</b>	<b>128 bits per pixel</b>	<b>160 bits per pixel</b>	<b>192 bits per pixel</b>	
4 x 3	1920 x 1440 @75 Hz	1920 x 1440 @75 Hz	1920 x 1440 @75 Hz	1920 x 1440 @75 Hz	
5 x 4	1600 x 1280 @76 Hz	1600 x 1280 @76 Hz	1600 x 1280 @76 Hz	1600 x 1280 @76 Hz	
16 x 9	2048 x 1152 @75 Hz	2048 x 1152 @75 Hz	2048 x 1152 @75 Hz	2048 x 1152 @75 Hz	
16 x 10	1920 x 1200 @75 Hz	1920 x 1200 @75 Hz	1920 x 1200 @75 Hz	1920 x 1200 @75 Hz	
5 x 4 Frame Sequential Stereo	1280 x 1024 @60 Hz	1280 x 1024 @60 Hz	1280 x 1024 @60 Hz	1280 x 1024 @60 Hz	
4 x 3 Frame Sequential Stereo	1280 x 960 @60Hz	1280 x 960 @60Hz	1280 x 960 @60Hz	1280 x 960 @60Hz	
<b>3D/2D Controller</b>	3Dlabs Wildcat II 2D/3D graphics controller technology				
<b>VGA Controller</b>	Standard VGA onboard				
<b>Bus Type</b>	AGP 4X / AGP Pro Graphics Bus				
<b>RAMDAC</b>	300 MHz				
<b>Memory Type</b>	SDRAM				
<b>Memory Amount</b>	64 MB				
<b>Memory Speed</b>	166 MHz				
<b>Controller Clock Speed</b>	204 MHz				
<b>Color Planes</b>	32-bit color buffer				
<b>Overlay Planes</b>	8-bit double buffer				
<b>Stencil Planes</b>	8-bit stencil buffer				
<b>Alpha Planes</b>	8-bit alpha double buffer				
<b>Z-buffer</b>	24, 32-bit Z buffer				
<b>Total bits/pixel</b>	96, 128, 160, 192				
<b>Maximum Vertical Refresh Rate</b>	90 Hz				
<b>Maximum Pixel Clock</b>	300MHz (analog); 162 Mhz (digital)				
<b>Multi-display support</b>	Yes				
<b>Operating Systems</b>	Microsoft Windows 2000, Microsoft Windows XP Professional, and Windows NT 4.0 available from Compaq				

### Technical Specifications

ATI Fire GL2 Graphics Controller	Dimensions (HxW)	Approximately 6.5 x 3.8 x 0.6 in/16.51 x 9.65 x 1.52 cm		
		Maximum Colors Supported	Maximum Refresh Rate	Memory Dedicated to Texture Support
	Resolution			
	640 x 480	16.7 M	240 Hz	28.4 MB
	800 x 600	16.7 M	240 Hz	26.4 MB
	1024 x 768	16.7 M	200 Hz	22.8 MB
	1152 x 864	16.7 M	170 Hz	20.3 MB
	1280 x 1024	16.7 M	150 Hz	16.6 MB
	1600 x 1000	64 K	120 Hz	22.6 MB
	1600 x 1000	16.7 M	120 Hz	13.3 MB
	1600 x 1200	64 K	100 Hz	20.8 MB
	1600 x 1200	16.7 M	100 Hz	9.5 MB
	1600 x 1280	64 K	100 Hz	20 MB
	1600 x 1280	16.7 M	100 Hz	8 MB
	1920 x 1080	64 K	85 Hz	19.9 MB
	1920 x 1080	16.7 M	85 Hz	7.7 MB
	1920 x 1200	64 K	85 Hz	18.5 MB
1920 x 1200	16.7 M	85 Hz	5 MB	
Form Factor	ATX			
3D/2D Controller	IBM RC1000 Rasterizer Chip			
VGA Controller	IBM RC1000 Rasterizer Chip			
Bus Type	AGP 2X/4X Version 2 compliant including side band signaling support			
RAMDAC	300 MHz IBM RC1000			
Memory Type	DDR SGRAM			
Memory Amount	64 MB DDR SGRAM unified frame buffer, Z-buffer and Texture storage			
Memory Speed	120 MHz			
Controller Clock Speed	120 MHz			
Color Planes	32 bit, True Color			
Overlay Planes	8-bit			
Stencil Planes	8-bit			
Alpha Planes	8-bit			
Z-buffer	24-bit			
Video Engine support	YUV (4:2:2, 4:2:0) conversion, point and bilinear scaling			
Mini-Din Stereo Interface support	StereoGraphics CrystalEyes shutter glasses			
Monitor	15-pin D-type analog			
Flat Panel Interface	DVI-D digital (supported resolutions up to 1280x1024 )			
Video Timings compliance	VESA DMT 1.0 and VESA GTF 1.0 specifications			
Total bits/pixel	117			
Maximum Vertical Refresh Rate	100 Hz / 120 Hz when Quad Buffer Stereo is enabled			
Maximum Pixel Clock	300 MHz			
Operating Systems	Microsoft Windows 2000, Microsoft Windows XP Professional, and Windows NT 4.0			

Note: All drivers can be found on the Compaq web site at:  
[www.compaq.com/support/files/workstations/us/index.html](http://www.compaq.com/support/files/workstations/us/index.html)

### Technical Specifications

ATI Fire GL4 3-D Graphics Accelerator	<b>Dimensions</b>	10.2 x 4.3 inches (26.0 x 10.8 cm)	
	<b>3-D/2-D controller</b>	ATI Fire GL4 3-D and 2-D Graphics Accelerator	
	<b>VGA connector</b>	Standard VGA on board	
	<b>Bus type</b>	AGP Pro50 1x/2x/4x	
	<b>RAMDAC</b>	300-MHz, 30-bit	
	<b>Memory</b>	Type—DDR SDRAM Amount—128 MB Speed—145 MHz Bus width—256 bits	
	<b>Geometry engine core clock speed</b>	190 MHz	
	<b>Colour planes</b>	Four	
	<b>Overlay planes</b>	8-bit DB (double buffer)	
	<b>Stencil planes</b>	8-bit clip/stencil planes	
	<b>Alpha planes</b>	8-bit stored alpha planes DB	
	<b>Display data channel (DDC)</b>	DDC2B support	
	<b>Power Draw</b>	8.5A @ 3.3V; 1.8A @ 5V; .5A @ 12V	
	<b>Z-buffer</b>	24-bit z buffer	
	<b>Total bits per pixel</b>	32	
	<b>Maximum vertical refresh rate</b>	100 Hz (120 Hz stereo)	
	<b>Maximum pixel clock</b>	300 MHz single head, 135 MHz dual head	
	<b>Multi-display support</b>	Yes, two VGA or two DVI	
	<b>Operating systems support</b>	Microsoft Windows 2000, Microsoft Windows NT 4.0, Windows XP Professional	
	<b>Software support</b>	2-D—GDI / GDI+ (GDI 2K) 3-D—OpenGL 1.1 / 1.2 <b>Note:</b> <a href="#">OpenGL extensions support the requirements of OpenGL applications</a>	
	<b>Bus interface</b>	AGP 1X/2X/4X; universal connector/slot—use one AGP Pro, one PCI physical space, no connector	
	<b>Form factor</b>	AGP Pro50 ATX half-length	
	<b>Regulatory certifications</b>	UL 1950 (U.S.), CUL 1950, CSA C22.2 No. 950 (1995), IEC 950, CISPR 22, 2 <sup>nd</sup> Edition 1993, FCC Class B, CE, CSA C108.8 Class B, SMA AS/NZS 3548 (Australia) C-Tick	
	<b>Documentation</b>	User guide (CD and online)	
	<b>Connectors</b>	2 DVI-I; one standard three-pin stereo connector	
<b>CRT Resolutions</b>	<b>Maximum Refresh Rate</b>	<b>Bits per Pixel</b>	
1920 x 1200	60, 76, 75Hz	32	
1600 x 1200	60, 75 and 85Hz	32	
1280 x 1024	60, 75 85 and 100Hz	32	
1280 x 960	60, 75, 85 and 100Hz	32	
1600 x 1000	60, 76, and 85Hz	32	
1024 x 768	60, 75, 85, 100, and 120 Hz (stereo)	32	
800 x 600	60, 75, 85, 100, and 120 Hz (stereo)	32	
640 x 480	60, 75, 85, 100, and 120 Hz (stereo)	32	

### Technical Specifications

#### ATI Fire GL4 3-D Graphics Accelerator (continued)

Digital Resolutions	Maximum Refresh Rate	Bits per Pixel
1600 x 1200	60 Hz	32
1280 x 1024	60, 75 and 85Hz	32
1280 x 960	60, 75 and 85Hz	32
1600 x 1000	60 Hz	32
1024 x 768	60, 75, 85 and 100 Hz	32
800 x 600	60, 75, 85 and 100Hz	32
640 x 480	60, 75, 85 and 100Hz	32

**Note:** The above table shows the highest resolutions supported for the Fire GL 4 when it is configured in single display mode. Resolutions higher than 1600 x 1200 are supported only for analog CRT monitors. Digital output not recommended for stereo support.

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