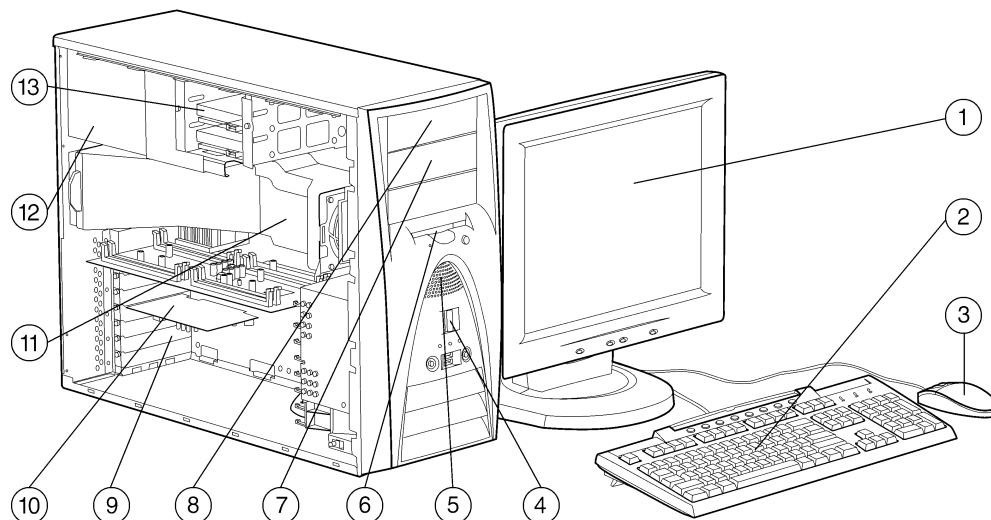


### Overview

#### At A Glance

- Minitower form factor for increased expandability
- Supports up to two Intel® Xeon® processors, up to 2.2-GHz (depending on the model)
- Intel 860 chipset with 400-MHz front side bus, dual memory channels, dual-peer PCI buses, and 64-bit/66-MHz PCI
- 256-KB or 512-KB L2 cache integrated on processor
- ECC RDRAM expandable to 4-GB
- High-performance Ultra160 SCSI 10,000 rpm or 15,000 rpm hard drives or UATA/100 7200 RPM hard drives
- Integrated dual channel Ultra160 SCSI and Ultra ATA/100 controllers
- Up to 360GB of high-performance internal storage
- Choice of 3Dlabs Wildcat™ II 5110, ATI Fire GL2, ATI Fire GL4, NVIDIA® Quadro2 EX, NVIDIA Quadro2 MXR, NVIDIA Quadro2 Pro, Matrox® Millennium® G450 dual, Matrox Millennium G550 or Matrox Millennium G200 Quad MMS graphics controllers
- Multiple display support
- Integrated Intel PRO/100+ Management Adapter
- Seven total slots (two 64-bit/66-MHz PCI, four 32-bit/33-MHz PCI, one AGP Pro 4X)
- Seven bays (four internal and three external)
- CD-ROM, DVD-ROM, or CD-RW drive (depending on model)
- SoundBlaster 128 Audio with support for digital output
- Windows® XP® Professional, Windows 2000® Professional, or Windows NT® Workstation 4. 0 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. 3-Button Mouse
4. On-Off Button
5. Speaker
6. 1.44-MB Diskette Drive
7. 5.25-inch Drive Bays (available)
8. CD-ROM Drive or DVD-ROM Drive
9. Expansion Slots
10. Graphics Board
11. Processor
12. 500-Watt Power Supply
13. Internal Drive Bays

### Standard Features - Pre-configured Models

<b>Models</b>	<b>Compaq Evo™ Workstation W8000</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 1.7 GHz, 256-KB cache Intel Xeon processor 1.8 GHz, 512-KB cache Intel Xeon processor 2.0 GHz, 256-KB cache Intel Xeon processor 2.0 GHz, 512-KB cache Intel Xeon processor 2.2 GHz, 512-KB cache	
<b>Cache Memory</b>	256-KB or 512-KB integrated, full-speed level 2 cache per processor	
<b>Upgradability</b>	Upgradable to dual processing	
<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
	Standard	256 MB of 800-MHz ECC RDRAM
	Maximum	4 GB of 800-MHz ECC RDRAM
<b>Network Controller</b>	Integrated Intel PRO/100+ Management Adapter	
<b>Expansion Slots</b>	I/O (Total)	7, up to 6 available
	64-bit/66-MHz PCI	2, 2 available
	32-bit/33-MHz PCI	4, up to 4 available depending on model
	AGP Pro 4X	1, up to 1 available depending on model
	(Total, Available)	7/4
	Internal	3/2
	External	4/2
<b>Storage</b> <i>One of the following:</i>	Diskette Drives	1.44 MB
	Removable Media	CD-ROM, DVD-ROM, or CD-RW Drive
	Hard Drives	18.2-GB Ultra160 SCSI (10,000 rpm) 18.2-GB Ultra160 SCSI (15,000 rpm)
<b>Interfaces</b>	Parallel	1
	USB	2 (in front)
	USB	2 (in back)
	Serial	2
	Ultra 160 SCSI	3 (Two 68-pin internal, One 68-pin external)
	Ultra ATA/100	2
	Keyboard (PS/2)	1
	Pointing Device (PS/2 mouse)	1
	Video	1
	Microphone Jack	1 (in front)
	Headphone Jack (analog/SPDIF digital)	1 (in front)
	Line-In Jack	1 (in front)
	Line-Out Jack (analog/SPDIF digital)	1 (in back)
	RJ-45 Network Connector	1

### Standard Features - Pre-configured Models

<b>Graphics</b> <i>One of the following:</i>	Matrox Millennium G550 Graphics Controller (AGP) Matrox Millennium G450 Graphics Controller (AGP or PCI) Matrox G200 Quad Multi-monitor Series 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 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 ( <b>Limited time license</b> )
<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 <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>	500-Watt, with Power Factor Correction (PFC)
<b>Diagnostic LEDs</b>	LEDs in front and on the keyboard are used to flash diagnostic codes in the event of trouble. During normal operation, front panel LEDs indicate power, drive usage, and network link/activity. At the rear of the W8000, LEDs indicate network link, activity, and connection speed. If opening the system is required, color-coded LEDs on the system board help to quickly identify the problem.
<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.

### Standard Features - Pre-configured Models

<b>W8/2.0/18K/512/Xd</b> <i>xxxxxx--xxx and graphics option</i>	<b>Processor</b>	Intel Xeon Processor 2.0GHz
	<b>Cache Memory</b>	256-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 15,000 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox Millennium G450 (AGP) (202389-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 Fire GL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio, Business Audio internal speaker
<b>OS</b>	Windows 2000 Professional/Windows NT Workstation (dual install)	
<b>W8P/1.8/18S/512/Xd</b> <i>xxxxxx--xxx and graphics option</i>	<b>Processor</b>	Intel Xeon Processor 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 (PCI) (202390-B21) Matrox Millennium G450 (AGP) (202389-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 Fire GL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio, Business Audio internal speaker
<b>OS</b>	Windows 2000 Professional/Windows NT Workstation (dual install)	
<b>W8/1.7/18K/512/Xd</b> <i>xxxxxx--xxx and graphics option</i>	<b>Processor</b>	Intel Xeon Processor 1.7 GHz
	<b>Cache Memory</b>	256-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 15,000 rpm
	<b>Graphics</b>	Choice of graphics option: Matrox Millennium G550 with analog and DVI cables (AGP) (250227-B21) Matrox Millennium G450 (PCI) (202390-B21) Matrox Millennium G450 (AGP) (202389-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 Fire GL4 (245012-B21) 3DLabs Wildcat II 5110 (224085-B21)
	<b>Audio</b>	Integrated SoundBlaster 128 Audio, Business Audio internal speaker
<b>OS</b>	Windows 2000 Professional/Windows NT Workstation (dual install)	

### Standard Features – Custom Configuration Models

<b>Processor</b>	Intel Xeon processor 1.5 GHz, 256-KB cache	
	Intel Xeon processor 1.7 GHz, 256-KB cache	
	Intel Xeon processor 1.8 GHz, 512-KB cache	
	Intel Xeon processor 2.0 GHz, 256-KB cache	
	Intel Xeon processor 2.0 GHz, 512-KB cache	
	Intel Xeon processor 2.2 GHz, 512-KB cache	
<b>Cache Memory</b>	256-KB or 512-KB integrated, full-speed Level 2 cache per processor	
<b>Upgradability</b>	Upgradable to dual processor	
<b>Memory</b>	Maximum	4 GB of 800-MHz ECC RDRAM
<b>Network Controller</b>	Integrated Intel PRO/100+ Management Adapter 3COM 3C920C	
<b>Expansion Slots</b>	I/O (Total)	7, up to 6 available
	64-bit/66-MHz PCI	2, 2 available
	32-bit/33-MHz PCI	4, up to 4 available depending on model
	AGP Pro/AGP 4X	1, up to 1 available depending on model
<b>Expansion Bays</b>	(Total/Available)	7/4
	Internal	3/2
	External	4/2
<b>Storage</b>	Diskette Drives	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-GB, 60-GB, 40-GB or 20-GB Ultra ATA (7200 rpm)
Tape Drives	TR5 10/20GB	
	250-MB ATAPI ZIP	
	Ecix 33/66 GB VXA-1 Tape Drive (SCSI or IDE)	
<b>Interfaces</b>	Parallel	1
	USB	2 (in front)
	USB	2 (in back)
	Serial	2
	Ultra 160 SCSI	3 (two 68-pin internal, one 68-pin external)
	Ultra ATA/100	2
	Keyboard (PS/2)	1
	Pointing Device (PS/2 mouse)	1
	Video	1
	Microphone Jack	1 (in front)
	Headphone Jack (analog/SPDIF digital)	1 (in front)
	Line-In	1 (in back)
	Line-Out (analog/SPDIF digital)	1 (in back)
	RJ-45 Network Connector	1

### Standard Features – Custom Configuration Models

<b>Graphics</b> <i>One of the following:</i>	<ul style="list-style-type: none"> <li>Matrox Millennium G450 (AGP or PCI)</li> <li>Matrox G200 Quad MMS (PCI)</li> <li>Matrox Millennium G550 (AGP)</li> <li>NVIDIA Quadro2 EX (AGP)</li> <li>NVIDIA Quadro2 MXR (AGP)</li> <li>NVIDIA Quadro2 Pro (AGP)</li> <li>ATI Fire GL2 (AGP)</li> <li>ATI FireGL4 (AGP)</li> <li>3DLabs Wildcat 5110 (AGP)</li> </ul>
<b>Audio</b>	Integrated SoundBlaster 128 Audio
<b>Software</b>	<ul style="list-style-type: none"> <li>Windows XP Professional</li> <li>Microsoft Windows NT Workstation 4.0 or Windows 2000</li> <li>Microsoft Service Pack 6a for Windows NT 4.0</li> <li>Microsoft Service Pack 2 for Windows 2000 Professional</li> <li>Compaq Restore CD</li> <li>Compaq Management Agents</li> <li>Compaq PC Diagnostics via the Web</li> <li>ROM-based Setup</li> <li>Diagnostics for Windows 2000 and Windows NT</li> <li>Microsoft Internet Explorer</li> <li>System Software Manager via the Web</li> <li>Altiris eXpress (<b>Limited time license</b>)</li> </ul>
<b>Intelligent Manageability</b>	<ul style="list-style-type: none"> <li>Asset Control</li> <li>Alert on LAN (AoL) hardware ready</li> <li>Wake on LAN (WoL)</li> <li>Fault Management</li> <li>Lite Console</li> <li>Security Management</li> <li>Pre-Failure Warranty (processors, hard drives and memory)</li> <li><b>Remote Management</b> <ul style="list-style-type: none"> <li>Remote Wakeup via Magic Packet Support</li> <li>Remote ROM Flash</li> <li>Remote Security</li> <li>Remote Shut Down</li> </ul> </li> <li><b>Bios Features</b> <ul style="list-style-type: none"> <li>Advanced Configuration and Power Interface (ACPI) 1.0b</li> <li>Advanced Power Management (APM) 1.2</li> <li>Desktop Management Interface (DMI) 2.1</li> <li>System Management (SM) Bios 2.3</li> </ul> </li> </ul>
<b>Security</b>	<ul style="list-style-type: none"> <li>Diskette write and boot control</li> <li>Flash ROM lock</li> <li>Keyboard password</li> <li>Network server mode</li> <li>Parallel interface control</li> <li>Power-on password</li> <li>Serial interface control</li> <li>Setup password</li> <li>Cable lock provision</li> </ul>
<b>Power Supply</b>	500-Watt, with Power Factor Correction (PFC)
<b>Diagnostic LEDs</b>	LEDs in front and on the keyboard are used to flash diagnostic codes in the event of trouble. During normal operation, front panel LEDs indicate power, drive usage, and network link/activity. At the rear of the W8000, LEDs indicate network link, activity, and connection speed. If opening the system is required, color-coded LEDs on the system board help to quickly identify the problem.
<b>Service and Support</b>	<p>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.</p> <p><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.</p>

### Options

<b>Processor</b>	Intel Xeon processor 1.5 GHz,256-KB cache w/ VRM	238674-B21
	Intel Xeon processor 1.7 GHz, 256-KB cache w/VRM	238675-B21
	Intel Xeon processor 1.8 GHz, 512-KB cache w/VRM	277602-B21
	Intel Xeon processor 2.0 GHz, 256-KB cache w/VRM	257456-B21
	Intel Xeon processor 2.0 GHz, 512-KB cache w/VRM	277603-B21
	Intel Xeon processor 2.2 GHz, 512-KB cache w/VRM	267804-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 equal size 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-xxx
	TFT8020 Flat Panel Color Monitor (18-inch, Carbon)	159244-xxx
	TFT8020 Flat Panel Color Monitor (17-inch, Opal)	326100-xxx
	TFT7020 Flat Panel Color Monitor (17-inch, Carbon/Silver, baseless)	253218-xxx
	TFT7020 Flat Panel Color Monitor (17-inch, Carbon/Silver, built in speakers)	253217-xxx
	TFT5030 Flat Panel Color Monitor (15-inch, Carbon/Silver)	228134-xxx
	TFT5015 Flat Panel Color Monitor (15-inch, Multimedia)	234046-xxx
	TFT5015 Flat Panel Color Monitor (15-inch, Carbon/Silver)	234044-xxx
	TFT5015 Flat Panel Color Monitor (15-inch, Opal)	234043-xxx
	P1220 CRT Color Monitor (22-inch, Carbon/Silver)	244374-xxx
	P920 CRT Color Monitor (19-inch, Carbon/Silver)	244375-xxx
	P720 CRT Color Monitor (17-inch, Carbon/Silver Two Tone)	244373-xxx
	V720 CRT Color Monitor (17-inch, Carbon/Silver Two Tone)	232944-xxx
	<b>Note:</b> AssetControl monitor. AssetControl features are accessible with Compaq Workstations featuring Intel® Igenit Manageability.	
<b>Graphics</b>	Matrox G200 Quad Multi-monitor Series with cables for analog output (32MB) (PCI)	159513-B21
	Matrox G200 Quad Multi-monitor Series with cables for DVI output (32MB) (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 cable (AGP)	250227-B21
	Matrox Millennium G450 DualHead (16MB) (PCI)	202390-B21
	Matrox Millennium G450 DualHead (32MB) (AGP)	202389-B21
	NVIDIA Quadro2 EX (32MB) (AGP)	250066-B21
	NVIDIA Quadro2 MXR (32MB) (AGP)	221412-B21
	NVIDIA Quadro2 Pro (64MB) (AGP)	225339-B21
	ATI Fire GL4 (128MB) (AGP)	245012-B21
	ATI Fire GL2 (64MB) (AGP)	224087-B21
	3DLabs Wildcat II 5110 (64MB) (AGP)	224085-B21
<b>Diskette Drives</b>	250-MB ZIP Drive (carbon)	294416-B22
	250-MB ZIP Media 3-Pack	217896-B21

### Options

Tape Drives	TR5 10/20-GB (Carbon)	294243-B22	
	TR5 10/20-GB Media (3-Pack)	125782-B21	
	33/66 GB VXA-1 SCSI Tape Drive (Carbon)	237108-B22	
	33/66 GB VXA-1 IDE Tape Drive (Carbon)	237109-B22	
	33/66 GB VXA-1 Media (2-Pack)	237111-B21	
	VXA-1 Cleaning Cartridge	237110-B21	
Hard Drives	<b>Ultra3 (Ultra160) SCSI Drives</b>		
	72-GB Ultra160 SCSI 10,000 rpm (1")	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	
	<b>Ultra ATA Drives</b>		
	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 (outside EMEA)	176272-B21	
	20-GB Ultra ATA 7200 rpm Quiet Seek and Quiet Idle (EMEA only)	176275-021	
	Storage Controllers	Adaptec 29160N Ultra 160 (U3) Single Channel SCSI Controller	157810-B21
		Adaptec 2100S Ultra 160 (U3) Single Channel RAID Controller	192842-B21
StorageWorks™ Enclosure 4314R by Compaq		190209-001	
StorageWorks Smart Array Controller 5304/128		158939-B21	
StorageWorks Smart Array Controller 5302/64		124992-B21	
StorageWorks Smart Array Controller 5302/32		166207-B21	
Biometrics	USB Biometric ID Device	240238-B21	
Multimedia	48X CD-ROM (carbon)	187217-B22	
	16X/40X DVD-ROM (carbon, without MPEG2 decoder)	237495-B22	
	16X/10X/40X CD-RW Drive (carbon)	240598-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 (NA)	246637-001	
	Labtec Spin-22 Carbon Speakers (EMEA)	246637-022	
	Labtec Spin-22 Carbon Speakers (APD)	246637-031	
	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-RW (single sided) media kit	211082-B21	
Communications	Intel Pro/100+ Management Adapter w/IP Security (Single Pack)	212953-B21	
	Intel Pro/100+ Management Adapter w/IP Security (20 Pack)	212954-B21	
	Compaq NC3123 Fast Ethernet NIC PCI 10/100 WoL	174830-B21	
	Compaq NC3134: 64 PCI, Dual Base 10/100 WoL	138603-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 (WW)	239137-xxx	
	V.92 56K International SftWin Modem for Phillipines, India, Hungary, Russia, Slovakia	259032-B24	



### Options

<b>Uninterruptible Power Systems</b>	Compaq Tower UPS Model T2000 (low voltage)	242688-005
	Compaq Tower UPS Model T2400h (high voltage, not available in North America)	242688-006
	Compaq Tower UPS Model T1500 (low voltage)	242688-003
	Compaq Tower UPS Model T1500h (high voltage, not available in North America)	242688-004
	Compaq Tower UPS Model T1000 (low voltage)	242688-001
	Compaq Tower UPS Model T1000h (high voltage, not available in North America)	242688-002
	Compaq Tower UPS Model T700 (low voltage)	295372-B21
	Compaq Tower UPS Model T700h (high voltage, not available in North America)	295372-B22
<b>Other</b>	Compaq Scroll Mouse (Carbon)	170299-B22
	3 Button Mouse (carbon)	269192-B23
	Compaq Easy Access Keyboard (Carbon)	202109-xx8
	Spaceball 4000 3D Motion Controller (Carbon)	112138-B22
	External SCSI Adapter 68-/50-Pin	270187-B21
	5 Device LVD/SE Cable Kit	401707-B21
	External SCSI Adapter 68/50 Pin	270187-B21
	Rack Fixed Shelf	303606-B21
	Sliding Shelf Kit	332564-B21
	Depth Adjustable Rails	332558-B21
	Rack Face Plate Kit	338544-B23
<b>Support Software CD</b>	Annual Subscription	183426-xxx
	Single CD-ROM (current month)	272505-001

### Memory

#### Compaq Evo Workstation W8000

##### 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 3328 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 4 GB of 800-MHz ECC RDRAM is available with the removal of the two standard 128-MB RDRAM modules and the installation of optional 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-Top		Memory Channel B-Top		Memory Channel A-Bottom		Memory Channel B-Bottom	
RIMM Slot		XMM4	XMM2	XMM3	XMM1	XMM6	XMM8	XMM5	XMM7
Standard	256 MB	128 MB	CRIMM	128 MB	CRIMM	Empty	Empty	Empty	Empty
Optional	512 MB	128 MB	128 MB	128 MB	128 MB	Empty	Empty	Empty	Empty
Optional	1024 MB	256 MB	256 MB	256 MB	256 MB	Empty	Empty	Empty	Empty
Optional	2048 MB	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
Maximum	4096 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB

Following are memory options available from Compaq:

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

### Memory

#### Compaq Evo Workstation W8000

##### 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 3584 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 4 GB of 800-MHz ECC RDRAM is available with the removal of the standard 128-MB RDRAM modules and the installation of optional 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-Top		Memory Channel B-Top		Memory Channel A-Bottom		Memory Channel B-Bottom	
RIMM Slot		XMM4	XMM2	XMM3	XMM1	XMM6	XMM8	XMM5	XMM7
Standard	512 MB	256 MB	CRIMM	256 MB	CRIMM	Empty	Empty	Empty	Empty
Optional	1024 MB	256 MB	256 MB	256 MB	256 MB	Empty	Empty	Empty	Empty
Optional	2048 MB	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
Maximum	4096 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB

Following are memory options available from Compaq:

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

### Memory

#### Compaq Evo Workstation W8000

##### 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 4 GB of 800-MHz ECC RDRAM. Memory must be installed in like pairs.

##### STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

Support for up to 4 GB of 800-MHz ECC RDRAM is available with the removal of the standard 128-MB RDRAM modules and the installation of optional 800-MHz ECC RDRAM Kits. Memory must be installed in like pairs

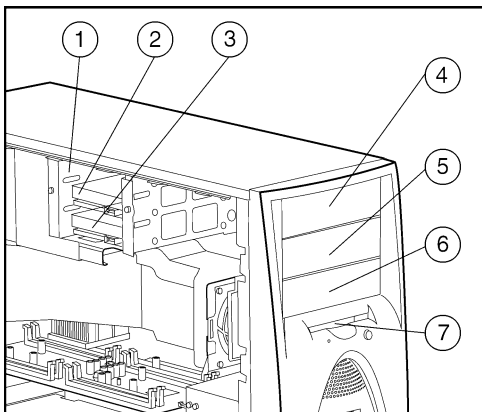
**Note:** This chart does not represent all possible memory configurations. Memory must be installed in like pairs. Option kits contain one memory module.

Memory		Memory Channel A-Top		Memory Channel B-Top		Memory Channel A-Bottom		Memory Channel B-Bottom	
RIMM Slot		XMM4	XMM2	XMM3	XMM1	XMM6	XMM8	XMM5	XMM7
Standard	1024 MB	512 MB	CRIMM	512 MB	CRIMM	Empty	Empty	Empty	Empty
Optional	2048 MB	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
Maximum	4096 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB	512 MB

Following are memory options available from Compaq:

- 512-MB Memory Kit (RDRAM RIMM, 800MHz) 103996-B21
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- 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	7	Integrated
CD-ROM Drive	Up to 1	4,5,6	Integrated EIDE
250-MB ATAPI ZIP Drive	Up to 1	4,5,6	Integrated EIDE
16X/40X DVD-ROM Drive	Up to 1	4,5,6	Integrated EIDE
16X/10X/40X CD-RW Drive	Up to 1	4,5,6	Integrated EIDE
TR5 10/20-GB tape drive	Up to 1	4,5,6	Integrated EIDE
33/66GB VXA-1 tape drive	Up to 1	4,5,6	Integrated EIDE
4.7-GB DVD-RAM Drive	Up to 1	4,5,6	Integrated EIDE
<b>Hard Drives</b>			
<i>Ultra 160 SCSI Drives</i>			
<b>1-inch</b>	Up to 5	1, 2, 3, 5, 6	Integrated Dual channel 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 4	1, 2, 3, 5, 6	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 (H x W x D)</b> Tower	17.75 x 8.05 x 23.75 in/45.1 x 20.5 x 60.3 cm
	Rack Mountable (5U)	8.68 x 17.75 x 23.75 in/22.1 x 45.1 x 60.3 cm
	<b>Weight (standard configuration)</b>	54.75 lbs/24.89 kg
<b>Power Supply</b>	Operating Voltage Range	100 VAC to 240 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	8A @ 115 VAC; 4A @ 230 VAC
	Maximum Rated Power	500-Watt output; 770-Watt input
	Physical Dimensions	6.5 x 5 x 6.9 in/16.51 x 12.7 x 17.54 cm
	Weight	7 lbs/3.18 kg
<b>Temperature</b> (Values are subject to change)	Operating	50° to 95°F/10° to 35°C
	Non-operating	-22° to 140°F/-30° to 60°C
<b>Humidity (non-condensing)</b> (Values are subject to change)	Operating	20% to 80%
	Non-operating	10% to 95%
<b>Maximum Altitude</b> (nonpressurized)	Operating	10,000 ft/3,048 m
	Non-operating	30,000 ft/9,144 m
<b>Compaq Easy Access Keyboard</b>	<b>Dimensions (H x W x D)</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>	<b>Track-to-Track (high/low)</b>	3/6 ms	
		<b>Average (high/low)</b>	94/173 ms	
		<b>Settling Time</b>	15 ms	
		<b>Latency Average</b>	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>	<b>Height</b>	1.42 in/3.6 cm	
		<b>Length</b>	4.17 in/10.7 cm	
		<b>Width</b>	2.87 in/7.4 cm	
		<b>Weight</b>	5.20 oz/150 g	
	<b>Environmental</b>	<b>Operating Temperature</b>	32° to 104° F/0°C to 40° C	
		<b>Non-operating Temperature</b>	-4° to 140° F/-20° to 60°C	
		<b>Operating Humidity</b>	10% to 90% (non condensing at ambient)	
	<b>Mechanical</b>	<b>Resolution</b>	400 ± 20% DPI	
		<b>Tracking Speed</b>	10 in/s Maximum	
		<b>Switch Life</b>	1,000,000 operations (using Hasco modified tester)	
		<b>Switch Type</b>	Micro-switches	
		<b>Tracking Mechanism Life</b>	155 miles/250 km at average speed of 10 in/s	
		<b>Cable Length</b>	6 ft/1.8 m	
		<b>PC98-99</b>	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	
	201735-B21	<b>Height</b>	1.6 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		
<hr/>				
36.4 GB	232916-B22	<b>Capacity</b>	36,419.2 MB	
		<b>Height</b>	1.0 in/25.4 mm	
		<b>Width</b>	4.0 in/101.6 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	0.4 ms
			Average	3.8 ms
			Full-Stroke	7 ms
			Rotational Speed	15,000 rpm
		<b>Logical Blocks</b>	71,132,000	
	<b>Operating Temperature</b>	50° to 95°F/10° to 35°C		
<hr/>				
36.4 GB	250022-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		
<hr/>				
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

Ultra160 SCSI Hard Drives <i>(continued)</i>	18.2 GB	Capacity	18,209 MB	
	159764-B21	Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Interface	Ultra160 SCSI	
		Synchronous Transfer Rate (Maximum)	160 MB/s	
		Seek Time (typical reads, including settling)	Single Track	0.6 ms
			Average	4.7 ms
			Full-Stroke	12 ms
			Rotational Speed	10,000 rpm
		Logical Blocks	35,566,000	
	Operating Temperature	50° to 95°F/10° to 35°C		
Ultra ATA Hard Drives	120 GB	Capacity	120,000 MB	
	250021-B21	Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Interface	Ultra ATA/100	
		Synchronous Transfer Rate (Maximum)	100 MB/s	
		Seek Time (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)
			Rotational Speed	7200 rpm
		Logical Blocks	234,441,648	
	Operating Temperature	41° to 131°F/5° to 55°C		
80 GB	250020-B21	Capacity	80,000 MB	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Interface	Ultra ATA/100	
		Synchronous Transfer Rate (Maximum)	100 MB/s	
		Seek Time (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)
			Rotational Speed	7200 rpm
		Logical Blocks	157,278,240	
	Operating Temperature	41° to 131°F/5° to 55°C		
60 GB	230253-B21	Capacity	60,000 MB	
		Height	1 in/25.4 mm	
		Width	3.5 in/88.9 mm	
		Interface	Ultra ATA/100	
		Synchronous Transfer Rate (Maximum)	100 MB/s	
		Seek Time (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)
			Rotational Speed	7200 rpm
		Logical Blocks	117,231,408	
	Operating Temperature	41° to 131°F/5° to 55°C		

## Technical Specifications

<b>Ultra ATA Hard Drives</b> <i>(continued)</i>	<b>40 GB</b>	<b>Capacity</b>	40,000 MB	
	<i>201066-B21</i>	<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</b> (Maximum)	66.6 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)
			Rotational Speed	7200 rpm
		<b>Logical Blocks</b>	78,165,360	
	<b>Operating Temperature</b>	41° to 131°F/5° to 55°C		
	<b>20 GB</b>	<b>Capacity</b>	20,000 MB	
	<i>176272-B21</i>	<b>Height</b>	1 in/25.4 mm	
	<i>(outside</i>	<b>Width</b>	3.5 in/88.9 mm	
	<i>EMEA)</i>	<b>Interface</b>	Ultra ATA	
	<i>176275-B21</i>	<b>Synchronous Transfer Rate</b> (Maximum)	66.6 MB/s	
	<i>(EMEA only)</i>	<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)
			Rotational Speed	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>	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	18.0 ms (21.1 ms quiet seek)
	<b>Rotational Speed</b>	540 MB (Mode 1, 12 cm)	7200 rpm
		650 MB (Mode 2, 12 cm)	
	<b>Diameter</b>	8750 maximum	
		4.7 in, 3.15 in/12 cm, 8 cm	
		Center Hole	0.6 in/15 mm diameter
		Thickness	0.05 in/1.2 mm
	<b>Block Size</b>	Track Pitch	1.6 $\mu$ m
		Mode 1	2,048 bytes
		Mode 2	2,340, 2,336 bytes
CD-DA		2,352 bytes	
<b>Interface</b>	CD-XA	2,328 bytes	
	IDE		
<b>Access Times (typical)</b>	Random	< 100 ms	
	Full-Stroke	< 150 ms	
<b>Audio Output Level</b>	Line-Out	0.7 VRMS	
<b>Data Transfer Rate</b>	Sustained	150 KB/s (1X, using audio disc)	
	Variable	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	41° to 113°F/5° to 45°C	
	Humidity	10% to 80%	
<b>Dimensions</b>	(HxWxD, maximum)	1.7 x 5.9 x 8.19 in/4.29 x 15 x 20.8 cm	
	Weight	2.65 lbs/1.2 kg	

### 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, Windows NT 4.0 (for data applications only), Windows XP Professional	
	<b>MPEG Video playback compatibility</b>	Please refer to the platform for support	
	<b>RPC2 (Regional Protection Yes Control)</b>		
	<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>4.7-GB DVD-RAM Drive</b>	<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 in (4.23 x 14.81 x 20.75 cm)	
	Weight	2.65 lbs (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 NT 4.0, Window XP Professional		

### Technical Specifications

<b>SoundBlaster 128 Audio</b>	<b>Type</b>	PCI
	<b>Sound Quality</b>	20-bit Stereo Full-Duplex (CD Quality)
	<b>Sampling</b>	Variable 4 kHz to 48 kHz
	<b>Audio Compression/Decompression</b>	ESPCM and ADPCM compression
	<b>Full Scale Input Voltage (RMS)</b>	Microphone-in 40 mVolts Line-in 1.0 Volts
	<b>Full Scale Output Voltage (RMS)</b>	Line-out 2.0 Volts
	<b>Impedance (nominal)</b>	Line-out 800 ohms (typical) Line-in 20 Kohms (typical) Microphone-in, Microphone-out
	<b>Playback (PC-D-A)</b>	Dynamic Range -91 dB (typical) Total Harmonic Distortion + Noise -69 dB (typical) Frequency Response (-3 dB) 20 Hz to 20 kHz
	<b>Line Output Crosstalk (10 kHz)</b>	-88 dB
	<b>Headphone Maximum Output (1 kHz)</b>	60 mWrms into 32 ohms (THD+N < 1%)
	<b>Internal Power Amplifier Rating</b>	Nominal 1.5 Watts RMS @ 8 ohms Maximum 5 Watts RMS @ 8 ohms
	<b>Speaker</b>	Frequency Response 200 Hz to 15 kHz Equalizer 5 stages of fixed equalization Design High-performance, infinite baffle loudspeaker
	<b>Connectors</b>	Line-in, line-out, microphone-in, headphone-out
	<b>Operating System Driver Support</b>	Windows NT 4.0, Windows 98, Windows 2000, Windows XP Professional

### Technical Specifications

Intel PRO/100+ Management Adapter	Network Interface	10Base-T or 100Base-TX	
	Expansion Bus Architecture	PCI 2.2	
Network Transfer Rate	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	
Connectors	RJ-45		
Standards Compliance	10-MB/s Ethernet	IEEE 802.3	
	100-Mb/s Ethernet	IEEE 802.3 $\mu$	
I/O Address	Auto-configured		
Remote Wakeup	Yes		
Operating Temperature	0° to 55°F/10° to 35°C		
Operating Humidity (non-condensing)	85% at 131°F/55°C		
Operating Altitude	10,000 ft/3,048 m		
Communication Processor	Intel 82559		
OS Driver Support	Windows XP Professional	Supported	
	Windows NT 4.0	NDIS 3.0, 4.0 Compliant	
	Windows 95, 98, 2000	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, Windows NT 4.0, Windows XP Professional			
		<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 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>TwTwo 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, Windows 98 and Windows NT 4.0, Windows XP Professional																										
	<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	Yes
	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	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.

<i>Primary CRT Color Depths</i>	<i>Color Depths (bpp)</i>	<i>Refresh Rates</i>
640 x 480	8, 16, 24, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz
800 x 600	8, 16, 24, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz
1024 x 768	8, 16, 24, 32	60 Hz, 70 Hz, 75 Hz, 85 Hz
1152 x 864	8, 16, 24, 32	75 Hz
1280 x 960	8, 16, 24, 32	60 Hz, 75 Hz, 85 Hz
1280 x 1024	8, 16, 24, 32	60 Hz, 75 Hz, 85 Hz
1600 x 1200	8, 16, 24, 32	60 Hz, 65 Hz, 70 Hz, 75 Hz, 85 Hz (available in single monitor configuration only)
1800 x 1440	8, 16, 24	60 Hz, 72 Hz, 75 Hz, 85 Hz
1856 x 1392	8, 16, 24	60 Hz, 75 Hz, 85 Hz
1920 x 1440	8, 16, 24	60 Hz, 75 Hz, 85 Hz
2048 X 768	8, 16	60 Hz, 75 Hz
<i>Secondary CRT Color Depths</i>	<i>Color Depths (bpp)</i>	<i>Refresh Rates</i>
640 x 480	16, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz
800 x 600	16, 32	60 Hz, 72 Hz, 75 Hz, 85 Hz
1024 x 768	16, 32	60 Hz, 70 Hz, 75 Hz, 85 Hz
1152 x 864	16, 32	75 Hz
1280 x 960	16, 32	60 Hz, 75 Hz, 85 Hz
1280 x 1024	16, 32	60 Hz, 75 Hz, 85 Hz
1600 x 1200	16, 32	60 Hz, 65 Hz, 70 Hz, 75 Hz, 85 Hz

### 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

Matrox G200 Quad Multi-Monitor Series (MMS) Graphics Controller	Dimensions (HxW)	4.5x8 in/11.43x20.32 cm		
	Refresh Rate (per display)			
	<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 Professional (not available for Chinese, Taiwanese, or Korean languages), Windows NT 4.0, Windows XP Professional			

### 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 Professional, Windows NT 4.0, Windows XP Professional			

### 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	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 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>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 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>		166 MHz		
<b>Controller Clock Speed</b>		175 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>		No		
<b>Operating Systems</b>		Microsoft Windows 2000 Professional, Windows NT 4.0, Windows XP Professional		

**Note:** All drivers and enhanced software, including ELSA POWERdraft, , 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 Professional, Windows NT 4.0, Windows XP Professional				

### 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		
	Resolution	Maximum Colors Supported	Maximum Refresh Rate	Memory Dedicated to Texture Support
	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>Form Factor</b>	ATX			
<b>3D/2D Controller</b>	IBM <i>RC1000</i> Rasterizer Chip			
<b>VGA Controller</b>	IBM <i>RC1000</i> Rasterizer Chip			
<b>Bus Type</b>	AGP 2X/4X Version 2 compliant including side band signaling support			
<b>RAMDAC</b>	300 MHz IBM <i>RC1000</i>			
<b>Memory Type</b>	DDR SGRAM			
<b>Memory Amount</b>	64 MB DDR SGRAM unified frame buffer, Z-buffer and Texture storage			
<b>Memory Speed</b>	120 MHz			
<b>Controller Clock Speed</b>	120 MHz			
<b>Color Planes</b>	32 bit, True Color			
<b>Overlay Planes</b>	8-bit			
<b>Stencil Planes</b>	8-bit			
<b>Alpha Planes</b>	8-bit			
<b>Z-buffer</b>	24-bit			
<b>Video Engine support</b>	YUV (4:2:2, 4:2:0) conversion, point and bilinear scaling			
<b>Mini-Din Stereo Interface support</b>	StereoGraphics CrystalEyes shutter glasses			
<b>Monitor</b>	15-pin D-type analog			
<b>Flat Panel Interface</b>	DVI-D digital (supported resolutions up to 1280x1024 )			
<b>Video Timings compliance</b>	VESA DMT 1.0 and VESA GTF 1.0 specifications			
<b>Total bits/pixel</b>	117			
<b>Maximum Vertical Refresh Rate</b>	100 Hz / 120 Hz when Quad Buffer Stereo is enabled			
<b>Maximum Pixel Clock</b>	300 MHz			
<b>Operating Systems</b>	Microsoft Windows 2000 Professional, Windows NT 4.0, Windows XP Professional			

**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	Dimensions	10.2 x 4.3 inches (26.0 x 10.8 cm)	
	3-D/2-D controller	ATI Fire GL4 3-D and 2-D Graphics Accelerator	
	VGA connector	Standard VGA on board	
	Bus type	AGP Pro50 1x/2x/4x	
	RAMDAC	300-MHz, 30-bit	
	Memory	Type—DDR SDRAM Amount—128 MB Speed—145 MHz Bus width—256 bits	
	Geometry engine core clock speed	190 MHz	
	Colour planes	Four	
	Overlay planes	8-bit DB (double buffer)	
	Stencil planes	8-bit clip/stencil planes	
	Alpha planes	8-bit stored alpha planes DB	
	Display data channel (DDC)	DDC2B support	
	Power Draw	8.5A @ 3.3V; 1.8A @ 5V; .5A @ 12V	
	Z-buffer	24-bit z buffer	
	Total bits per pixel	32	
	Maximum vertical refresh rate	100 Hz (120 Hz stereo)	
	Maximum pixel clock	300 MHz single head, 135 MHz dual head	
	Multi-display support	Yes, two VGA or two DVI	
	Operating systems support	Microsoft Windows 2000, Microsoft Windows NT 4.0, Windows XP Professional	
	Software support	2-D—GDI / GDI+ (GDI 2K) 3-D—OpenGL 1.1 / 1.2 <b>Note:</b> OpenGL extensions support the requirements of OpenGL applications.	
	Bus interface	AGP 1X/2X/4X; universal connector/slot—use one AGP Pro, one PCI physical space, no connector	
	Form factor	AGP Pro50 ATX half-length	
	Regulatory certifications	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	
	Documentation	User guide (CD and online)	
	Connectors	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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