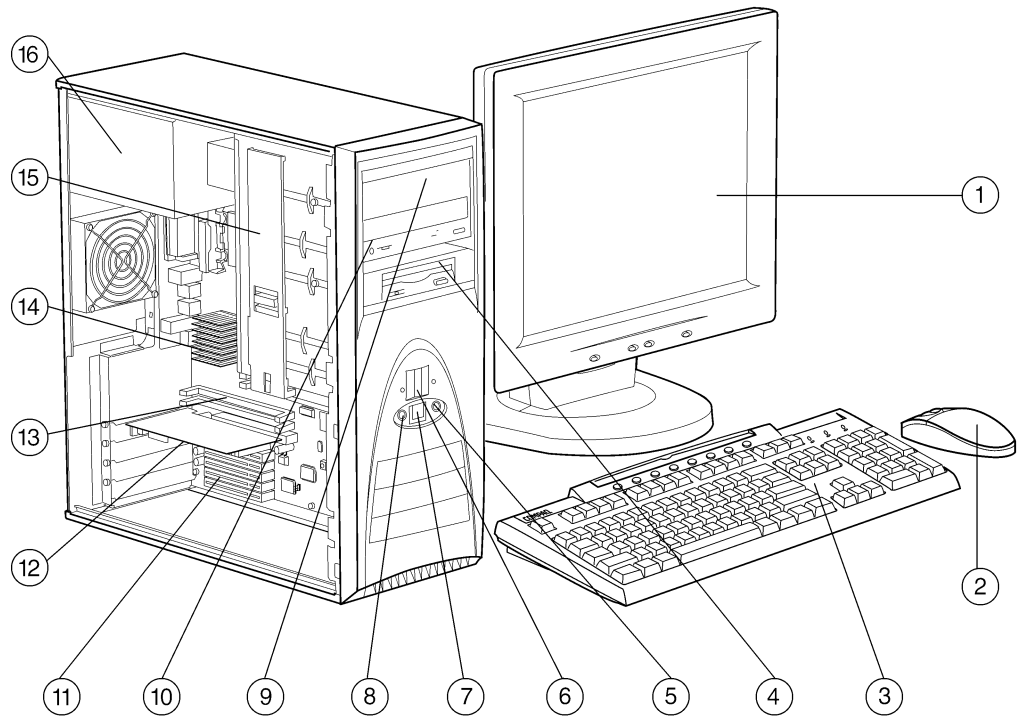


Overview

At A Glance

- Convertible minitower form factor
- Supports single Intel® Pentium® 4 processor at speeds up to 2.8 GHz (533 front side bus)
- Intel 845E chipset with 533-MHz front side bus
- 512-KB L2 cache integrated on processor
- ECC DDR 266-MHz expandable to 2 GB
- High-performance Ultra ATA 7200 rpm, Ultra160 SCSI 10,000 rpm or optional 15,000 rpm hard drives
- Integrated Ultra ATA/100 controller, Ultra160 SCSI controller (on SCSI models)
- Up to 360 GB of high-performance internal storage
- Choice of NVIDIA® Quadro2 EX, NVIDIA Quadro4 550 XGL, NVIDIA Quadro4 750 XGL, NVIDIA Quadro4 900 XGL, NVIDIA Quadro4 200 NVS, NVIDIA Quadro4 400 NVS, ATI® Fire GL 8800, Matrox® Millennium G450, or Matrox Millennium G550
- Multiple display support
- Integrated Intel PRO/100 VM Network Connection
- Six total slots (five PCI and one AGP 4X)
- Five bays (three external and two internal)
- 48X Max CD-ROM drive, DVD-ROM, CD-RW drive or Combo drive CD-RW & DVD-ROM (depending on model)
- Two front USB ports and two front audio ports
- Integrated AC'97 audio with internal speaker
- Windows® XP Professional or 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) | 9. 5.25-in Drive Bay (available) |
| 2. 3-Button Mouse | 10. Optical Drive |
| 3. Easy Access Keyboard | 11. PCI Slots |
| 4. 1.44-MB Diskette Drive | 12. AGP 4x Slot |
| 5. Audio Port | 13. Memory Sockets |
| 6. On-Off Button | 14. Processor |
| 7. USB Ports | 15. Drivelock |
| 8. Audio Port | 16. 250-Watt Power Supply |

Standard Features - Pre-configured Models

Models	Compaq Evo Workstation W4000 Available in multiple configurations. Not all configurations available in all countries. Check with your Authorized Compaq Reseller or Compaq.	
Processor <i>One of the following:</i>	Intel Pentium 4 processor 2.2 GHz/400MHz front side bus Intel Pentium 4 processor 2.4 GHz/533MHz front side bus	
Cache Memory	512-KB Level 2 cache	
Upgradability	Upgradable memory, graphics, and hard drives	
Memory <i>One of the following:</i>	Standard	512 MB ECC DDR 266MHz Note: Do not mix ECC and non-ECC memory.
	Maximum	2 GB (2 slots)
Network Controller	Integrated Intel PRO/100 VM Network Connection	
Expansion Slots	I/O (Total/Available)	6/5
	PCI	5/5
	AGP 4X	1/0
Expansion Bays	(Total/Available)	5/2
	Internal	2/1
	External	3/1
Storage	Diskette Drives	1.44 MB
	ROM Drives	16X/40X DVD-ROM Drive or 48X CD-ROM Drive
	Hard Drives	18.2-GB Ultra160 SCSI (10,000 rpm), 36-GB Ultra160 SCSI (10,000 rpm), 40-GB Ultra ATA/100 (7200 rpm), or 80-GB Ultra ATA/100 (7200 rpm)
Interfaces	Parallel	1 (rear)
	USB	4 (2 front, 2 rear)
	Serial	2 (rear)
	Ultra 160 SCSI	2 (1 68-pin internal) (rear) (on SCSI models)
	Ultra ATA/100	2 (1 primary, 1 secondary)
	Keyboard (PS/2)	1 (rear)
	Pointing Device (PS/2 mouse)	1 (rear)
	Video	1 (rear)
	Microphone Jack	1 (front)
	Headphone Jack	1 (front)
	Line-In Jack	1 (rear)
	Line-Out Jack	1 (rear)
	RJ-45	1 (rear)

Standard Features - Pre-configured Models

Graphics	<p>Matrox Millennium G450 (AGP) Matrox Millennium G550 (AGP) NVIDIA Quadro2 EX (AGP) NVIDIA Quadro4 200 NVS (AGP) NVIDIA Quadro4 400 NVS (PCI) NVIDIA Quadro4 550 XGL (AGP) NVIDIA Quadro4 750 XGL (AGP) NVIDIA Quadro4 900 XGL (AGP) ATI Fire GL 8800 (AGP)</p>
<i>One of the following:</i>	
Audio	<p>Integrated AC'97 audio Internal Speaker</p>
Software	<p>Microsoft Windows XP Professional or Windows 2000 Professional Microsoft Service Pack 2 for Windows 2000 Professional Compaq Restore CD Compaq Management Agents Compaq PC Diagnostics via the Web ROM-based Setup Diagnostics for Windows XP Professional and Windows 2000 Microsoft Internet Explorer System Software Manager via the Web Altiris express (30 Day Trial)</p>
Intelligent Manageability	<p>Asset Control Alert on LAN (AoL) hardware ready Wake on LAN (WoL) Fault Management Security Management Pre-Failure Warranty (processors, hard drives and memory) Remote Management Remote Wakeup via Magic Packet Support Remote ROM Flash Remote Security Remote Shut Down Bios Features 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</p>
Security	<p>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 Solenoid Sensor/Hood Lock (optional)</p>
Power Supply	<p>250-Watt Power Supply (PFC)</p>
Service and Support	<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. Note: Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details. Three-year, onsite and labor not available in all countries.</p>

Standard Features - Pre-configured Models

W4C/1.8/40A/256D/45Dc 470030-473	Processor	Intel Pentium 4 1.8-GHz
	Cache Memory	512-KB integrated L2
	Memory	256-MB ECC DDR 266MHz
	Optical Drive	48X CD-ROM Drive
	Hard Drive	40-GB Ultra ATA/100 7200 RPM
	Graphics	Matrox Millennium G450 (AGP) (202389-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

W4C/1.8/40A/256D/EXv 470030-474	Processor	Intel Pentium 4 1.8-GHz
	Cache Memory	512-KB integrated L2
	Memory	256-MB ECC DDR 266MHz
	Optical Drive	8X Combo Drive CD-RW & DVD-ROM (carbon)
	Hard Drive	40-GB Ultra ATA/100 7200 RPM
	Graphics	NVIDIA Quadro2 EX (250066-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

W4C/1.8/40A/256D/Xc 470027-901 and graphics option	Processor	Intel Pentium 4 1.8-GHz
	Cache Memory	512-KB integrated L2
	Memory	256-MB ECC DDR 266MHz
	Optical Drive	48X CD-ROM Drive
	Hard Drive	40-GB Ultra ATA/100 7200 rpm
	Graphics	Choice of graphics option: NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 Pro (225339-B21) ATI FireGL2 (224087-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G550 (AGP) DH AGP DVI/VGA (250227-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

W4C/2.0/80A/256D/EXv 470030-475	Processor	Intel Pentium 4 2.0-GHz
	Cache Memory	512-KB integrated L2
	Memory	256-MB ECC DDR 266MHz
	Optical Drive	8X Combo Drive CD-RW & DVD-ROM (carbon)
	Hard Drive	80-GB Ultra ATA/100 7200 rpm
	Graphics	NVIDIA Quadro2 EX (250066-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

Standard Features - Pre-configured Models

W4C/2.0/40A/256D/Xc <i>470028-034 and graphics option</i>	Processor	Intel Pentium 4 2.0-GHz
	Cache Memory	512-KB integrated L2
	Memory	256-MB ECC DDR 266MHz
	Optical Drive	48X CD-ROM Drive
	Hard Drive	40-GB Ultra ATA/100 7200 rpm
	Graphics	Choice of graphics option: NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 Pro (225339-B21) ATI FireGL2 (224087-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G550 (AGP) DH AGP DVI/VGA (250227-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

W4C/2.2/18S/512D/Xd <i>470027-971 and graphics option</i>	Processor	Intel Pentium 4 2.2-GHz
	Cache Memory	512-KB integrated L2
	Memory	512-MB ECC DDR 266MHz
	Optical Drive	16X/40X DVD-ROM Drive
	Hard Drive	18.2-GB Ultra160 SCSI 10,000rpm
	Graphics	Choice of graphics option: NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 Pro (225339-B21) ATI FireGL2 (224087-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G550 (AGP) DH AGP DVI/VGA (250227-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

W4C/2.2/36S/512D/Xd <i>470027-974 and graphics option</i>	Processor	Intel Pentium 4 2.2-GHz
	Cache Memory	512-KB integrated L2
	Memory	512-MB ECC DDR 266MHz
	Optical Drive	16X/40X DVD-ROM Drive
	Hard Drive	36-GB Ultra160 SCSI 10,000rpm
	Graphics	Choice of graphics option: NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 Pro (225339-B21) ATI FireGL2 (224087-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G550 (AGP) DH AGP DVI/VGA (250227-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

Standard Features - Pre-configured Models

W4CP/2.4/80A/256D/Xc <i>470033-023 and graphics option</i>	Processor	Intel Pentium 4 2.4-GHz
	Cache Memory	512-KB integrated L2
	Memory	256-MB ECC DDR 266MHz
	Optical Drive	48X CD-ROM Drive
	Hard Drive	80-GB Ultra ATA/100 7200RPM
	Graphics	Choice of graphics option: NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 Pro (225339-B21) ATI FireGL2 (224087-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G550 (AGP) DH AGP DVI/VGA (250227-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

W4CP/2.4/18S/512D/Xd <i>470032-952 and graphics option</i>	Processor	Intel Pentium 4 2.24GHz
	Cache Memory	512-KB integrated L2
	Memory	512-MB ECC DDR 266MHz
	Optical Drive	16X/40X DVD-ROM Drive
	Hard Drive	18.2-GB Ultra160 SCSI 10,000rpm
	Graphics	Choice of graphics option: NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 Pro (225339-B21) ATI FireGL2 (224087-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G550 (AGP) DH AGP DVI/VGA (250227-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

W4CP/2.4/36S/512D/Xd <i>470032-977 and graphics option</i>	Processor	Intel Pentium 4 2.2-GHz
	Cache Memory	512-KB integrated L2
	Memory	512-MB ECC DDR 266MHz
	Optical Drive	16X/40X DVD-ROM Drive
	Hard Drive	36-GB Ultra160 SCSI 10,000rpm
	Graphics	Choice of graphics option: NVIDIA Quadro2 EX (250066-B21) NVIDIA Quadro2 Pro (225339-B21) ATI FireGL2 (224087-B21) Matrox Millennium G450 (AGP) (202389-B21) Matrox Millennium G550 (AGP) DH AGP DVI/VGA (250227-B21)
	Audio	Integrated AC97 audio with internal speaker
	OS	Windows XP Professional/Windows 2000 Professional (dual install)

Standard Features – Custom Configuration Models

Processor <i>(one of the following)</i>	Intel Pentium 4 processor 2.0 GHz/400 MHz front side bus Intel Pentium 4 processor 2.2 GHz/400 MHz front side bus Intel Pentium 4 processor 2.4 GHz/533 MHz front side bus Intel Pentium 4 processor 2.53 GHz/533 MHz front side bus Intel Pentium 4 processor 2.66 GHz/533 MHz front side bus Intel Pentium 4 processor 2.8 GHz/533 MHz front side bus	
Cache Memory	256-KB Level 2 cache (1.8 GHz models) 512-KB Level 2 cache (2.0GHz and 2.2GHz models)	
Upgradability	Upgradable memory, graphics, and hard drives	
Memory	Maximum	2 GB (2 slots) Note: Do not mix ECC and non-ECC memory.
Network Controller	Integrated Intel PRO/100 VM Network Connection	
Expansion Slots	I/O (Total/available)	6/5
	PCI	5/5 (depending on model)
	AGP 4X	1/0 (depending on model)
Expansion Bays	(Total/Available)	5/2
	Internal	2/1
	External	3/1
Storage	Diskette Drives	1.44 MB
	ROM Drives	48X Max CD-ROM Drive 16X/40X 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, 40-GB or 20-GB Ultra ATA/100 (7200 rpm)
	Removable Storage	40X/12X/40X CD-RW Drive 16X Combo Drive CD-RW & DVD-ROM or 4.7-GB DVD-RW Drive
Interfaces	Parallel	1 (rear)
	USB	4 (2 front, 2 rear)
	Serial	2 (rear)
	Ultra 160 SCSI	2 (1 68-pin internal) (rear) (on SCSI models)
	Ultra ATA/100	2 (1 primary, 1 secondary)
	Keyboard (PS/2)	1 (rear)
	Pointing Device (PS/2 mouse)	1 (rear)
	Video	1 (rear)
	Microphone Jack	1 (front)
	Headphone Jack	1 (front)
	Line-In Jack	1 (rear)
	Line-Out Jack	1 (rear)
	RJ-45	1 (rear)
	IEEE 1394 Firewire	2 (rear) (optional)
Graphics <i>One of the following:</i>	Matrox Millennium G450 (AGP) Matrox Millennium G550 (AGP) NVIDIA Quadro2 EX (AGP) NVIDIA Quadro4 200 NVS (AGP) NVIDIA Quadro4 400 NVS (PCI) NVIDIA Quadro4 550 XGL (AGP) NVIDIA Quadro4 750 XGL (AGP) NVIDIA Quadro4 900 XGL (AGP) ATI Fire GL 8800 (AGP)	

Options

Memory (DDR)	1-GB Memory Module (ECC DDR 266 MHz)	267908-B21
	512-MB Memory Module (ECC DDR 266 MHz)	267907-B21
	256-MB Memory Module (ECC DDR 266 MHz)	267906-B21
	128-MB Memory Module (ECC DDR 266 MHz)	267905-B21
	1-GB Memory Module (Non-ECC DDR 266 MHz)	282436-B21
	512-MB Memory Module (Non-ECC DDR 266 MHz)	282435-B21
	256-MB Memory Module (Non-ECC DDR 266 MHz)	282434-B21
	128-MB Memory Module (Non-ECC DDR 266 MHz)	282433-B21
	Note: Do not mix ECC and non-ECC memory.	

Monitors	TFT8030 Flat Panel Monitor (18-inch, Carbon/Silver)	234362-001	
	TFT7020 Flat Panel Monitor (17-inch, Carbon/Silver, built in speakers)	253217-001	
	TFT7020 Flat Panel Monitor (17-inch, Carbon/Silver, baseless)	253218-001	
	TFT5030 Flat Panel Monitor (15-inch, Carbon/Silver)	228134-001	
	TFT5030 Flat Panel Monitor (15-inch, Carbon/Silver, baseless)	250198-001	
	TFT5017 Flat Panel Monitor (15-inch, built-in speakers)	279414-001	
	TFT5017 Flat Panel Monitor (15-inch, Carbon/Silver)	263874-001	
	P1220 CRT Monitor (22-inch, Carbon/Silver)	244374-xxx	
	P920 CRT Monitor (19-inch, Carbon/Silver)	244375-xxx	
	P720 CRT Monitor (17-inch, Carbon/Silver)	244373-xxx	
	V7550 CRT Monitor (17-inch, Carbon/Silver)	261611-xxx	
	S9500 CRT Monitor (19-inch, Carbon/Silver)	261615-xxx	
	S7500 CRT Monitor (17-inch, Carbon/Silver)	261606-xxx	
	S5500 CRT Monitor (15-inch Carbon/Silver)	261602-xxx	
	Note: AssetControl monitor. AssetControl features are accessible with Compaq Workstations featuring Intelligent Manageability.		

Graphics	Matrox Millennium G450 (AGP)	202389-B21
	Matrox Millennium G550 (AGP)	250227-B21
	NVIDIA Quadro2 EX (AGP)	250066-B21
	NVIDIA Quadro4 550 XGL (AGP)	290648-B21
	NVIDIA Quadro4 750 XGL (AGP)	270731-B21
	NVIDIA Quadro4 900 XGL (AGP)	284279-B21
	NVIDIA Quadro4 200 NVS (AGP)	273304-B21
	DVI pigtail cable upgrade kit (used with Quadro4 200 NVS)	284281-B21
	NVIDIA Quadro4 400 NVS (PCI)	273305-B21
	DVI pigtail cable upgrade kit, quantity 2 (used with Quadro4 400 NVS)	284282-B21
	ATI Fire GL 8800 (AGP)	271686-B21

Hard Drives	Ultra3 (Ultra160) SCSI Drives	
	72-GB Ultra160 SCSI 10,000 rpm (1.0")	250023-B21
	36-GB Ultra160 SCSI 15,000 rpm	250022-B21
	36-GB Ultra160 SCSI 10,000 rpm	191189-B21
	18-GB Ultra160 SCSI 15,000 rpm	191188-B21
	18-GB Ultra160 SCSI 10,000 rpm	159764-B21
	Ultra ATA Drives	
	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
	40-GB Ultra ATA 7200 rpm Quiet Seek and Quiet Idle	201066-B21
	20-GB Ultra ATA 7200 rpm Quiet Seek and Quiet Idle	251974-B21

Options

Storage Controllers	Adaptec 29160N Ultra160 Single Channel SCSI Controller	157810-B21
	Adaptec 2100S Ultra 160 (U3) Single Channel RAID Controller	192842-B21
	Ultra ATA 100 RAID Card	238051-B21
Tape Drives	33/66 GB VXA-1 IDE Tape Drive	237109-B22
	33/66 GB VXA-1 SCSI Tape Drive	237108-B22
	33/66 GB VXA-1 Media (2 pack)	237111-B21
	VXA-1 Cleaning Cartridge	237110-B21
Biometrics	Indentix BioTouch USB Fingerprint Reader	240238-B21
Multimedia	48X CD-ROM	187217-B22
	16X/40X DVD-ROM Read	280625-B22
	40X/12X/40X CD-RW Drive	268985-B22
	4.7-GB DVD+RW Drive (2.4X/2.4X/8X DVD-RW and 12X10X32X CD-RW)	306816-B22
	16X Combo Drive CD-RW & DVD-ROM	273504-B22
	4.7-GB DVD-RW Drive	272851-B22
	Labtec Spin-22 Carbon Speakers (NA)	246637-001
	Labtec Spin-22 Carbon Speakers (EMEA)	246637-022
Labtec Spin-22 Carbon Speakers (APD)	246637-031	
Communications	Compaq NC7131 10/100/1000 Gigabit adapter	158575-B21
	Lucent V.90 56K PCI Win Modem	239137-xx1
	Intel PRO/100 S Management Adapter (one pack)	212953-B21
	Intel PRO/100 S Management Adapter (20 pack)	212954-B21
	Broadcom NetXtreme Based 10/100/1000 Management Gb Adapter	266997-B21
Uninterruptible Power Systems	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
Other	PS/2 2-Button Scroll Mouse	170299-B22
	PS/2 3-Button Mouse (carbon)	269192-B23
	USB 2-Button Scroll Mouse	195255-B25
	USB 2-Button Optical Scroll Mouse	265985-B21
	Compaq PS/2 Easy Access Keyboard	267145-xx8
	Compaq USB Easy Access Smartcard Keyboard	267147-xx8
	Logitech Cordless Desktop (Keyboard and Mouse)	251385-xx8
	Spaceball 4000 3D Motion Controller (carbon)	112138-B22
	Fixed Shelf for Rack	303606-B21
	Solenoid Hood lock/sensor	252076-B21
	Kensington Security Lock	294316-B21
	High-speed USB 2.0 PCI Card	287636-B21
Support Software CD	Annual Subscription	183426-xxx
	Single CD-ROM (current month)	272505-001

Memory

Compaq Evo Workstation W4000 (128 MB)

STANDARD MEMORY

128-MB of ECC DDR 266-MHz is standard.

STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1128-MB of ECC DDR 266-MHz is available with the installation of optional Memory Kits.

STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

Support for up to 2-GB of ECC DDR 266-MHz is available with the removal of the standard 128-MB ECC DDR 266-MHz module and the installation of optional Memory Kits.

Following are memory options available from Compaq:

- 1-GB Memory Kit (ECC DDR 266-MHz) 267908-B21
- 512-MB Memory Kit (ECC DDR 266-MHz) 267907-B21
- 256-MB Memory Kit (ECC DDR 266-MHz) 267906-B21
- 128-MB Memory Kit (ECC DDR 266-MHz) 267905-B21
- 1-GB Memory Kit (Non-ECC DDR 266-MHz) 282436-B21
- 512-MB Memory Kit (Non-ECC DDR 266-MHz) 282435-B21
- 256-MB Memory Kit (Non-ECC DDR 266-MHz) 282434-B21
- 128-MB Memory Kit (Non-ECC DDR 266-MHz) 282433-B21

Note: Do not mix ECC and non-ECC memory.

Memory

Compaq Evo Workstation W4000 (256 MB)

STANDARD MEMORY

256-MB of ECC DDR 266-MHz is standard.

STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1256-MB of ECC DDR 266-MHz is available with the installation of optional Memory Kits.

STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

Support for up to 2-GB of ECC DDR 266-MHz is available with the removal of the standard 256-MB ECC DDR 266-MHz module and the installation of optional Memory Kits.

Following are memory options available from Compaq:

- | | |
|---|------------|
| • 1-GB Memory Kit (ECC DDR 266-MHz) | 267908-B21 |
| • 512-MB Memory Kit (ECC DDR 266-MHz) | 267907-B21 |
| • 256-MB Memory Kit (ECC DDR 266-MHz) | 267906-B21 |
| • 128-MB Memory Kit (ECC DDR 266-MHz) | 267905-B21 |
| • 1-GB Memory Kit (Non-ECC DDR 266-MHz) | 282436-B21 |
| • 512-MB Memory Kit (Non-ECC DDR 266-MHz) | 282435-B21 |
| • 256-MB Memory Kit (Non-ECC DDR 266-MHz) | 282434-B21 |
| • 128-MB Memory Kit (Non-ECC DDR 266-MHz) | 282433-B21 |

Note: Do not mix ECC and non-ECC memory.

Memory

Compaq Evo Workstation W4000 (512 MB)

STANDARD MEMORY

512-MB of ECC DDR 266-MHz is standard.

STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1.5-GB of ECC DDR 266-MHz is available with the installation of optional Memory Kits.

STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

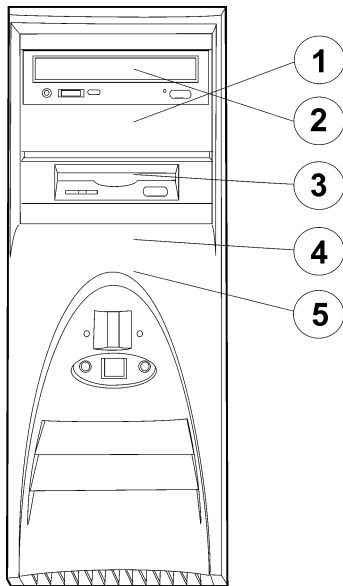
Support for up to 2-GB of ECC DDR 266-MHz is available with the removal of the standard 512-MB ECC DDR 266-MHz module and the installation of optional Memory Kits.

Following are memory options available from Compaq:

- 1-GB Memory Kit (ECC DDR 266-MHz) 267908-B21
- 512-MB Memory Kit (ECC DDR 266-MHz) 267907-B21
- 256-MB Memory Kit (ECC DDR 266-MHz) 267906-B21
- 128-MB Memory Kit (ECC DDR 266-MHz) 267905-B21
- 1-GB Memory Kit (Non-ECC DDR 266-MHz) 282436-B21
- 512-MB Memory Kit (Non-ECC DDR 266-MHz) 282435-B21
- 256-MB Memory Kit (Non-ECC DDR 266-MHz) 282434-B21
- 128-MB Memory Kit (Non-ECC DDR 266-MHz) 282433-B21

Note: Do not mix ECC and non-ECC memory.

Storage



DRIVE SUPPORT

	Quantity Supported	Position Supported	Controller
Removable Media			
1.44-MB Diskette Drive	Up to 1	1, 2, 3	Integrated
CD-ROM Drive	Up to 1	1, 2	Integrated EIDE
DVD-ROM Drive	Up to 1	1, 2	Integrated EIDE
CD-RW Drive	Up to 1	1, 2	Integrated EIDE
4.7-GB DVD-RW Drive	Up to 1	1	Integrated EIDE
Combo Drive CD-RW & DVD-ROM	Up to 1	1,2	Integrated EIDE
33/66GB VXA-1 IDE Tape Drive	Up to 1	1, 2	Integrated EIDE
33/66GB VXA-1 SCSI Tape Drive	Up to 1	1, 2	Ultra160 SCSI Controller (PCI)
Hard Drives			
<i>Ultra3 (Ultra 160) SCSI Drives</i>			
1-inch	Up to 3	1, 2, 4, 5	Ultra160 SCSI Controller (PCI)
72-GB 10,000 rpm			
36.4-GB 15,000 rpm			
36.4-GB 10,000 rpm			
18.2-GB 15,000 rpm			
18.2-GB 10,000 rpm			
<i>Ultra ATA Drives</i>			
1-inch	Up to 3	1, 2, 4, 5	Integrated EIDE
120-GB 7200 rpm			
80-GB 7200 rpm			
40-GB 7200 rpm			
20-GB 7200 rpm			
Maximum Storage Capacity			
Internal	360 GB (assumes two removable media drives installed)		

Technical Specifications

System Unit	Tower Dimensions (HxWxD)	17.65 x 6.6 x 17.61 in/44.83 x 16.76 x 44.73 cm		
	Weight (standard configuration)	26 lb/12 kg		
	Power Supply	Operating Voltage Range	90 VAC to 264 VAC	
		Rated Voltage Range	100 VAC to 120 VAC; 200 VAC to 240 VAC	
		Rated Line Frequency	47 Hz to 63 Hz	
		Rated Input Current	4.5A @ 115 VAC; 3.0A @ 230 VAC	
		Maximum Rated Power	250-Watt output;	
		Physical Dimensions	5.15 x 3.85 x 6.05 in/13 x 9.8 x 15.4 cm	
	Temperature (Values are subject to change)	Weight	4.5 lb/2.05 kg	
		Operating	50° to 95° F/10° to 35° C	
Humidity (non-condensing) (Values are subject to change)	Non-operating	4° to 140° F/-15° to 60° C		
	Operating	20% to 80%		
Maximum Altitude (non pressurized)	Non-operating	10% to 90%		
	Operating	10,000 ft/3,048 m		
	Non-operating	30,000 ft/9,144 m		
Compaq Easy Access Keyboard	Dimensions (HxWxD)	18.3 x 6.3 x 1.4 in/46.5 x 16 x 3.6 cm		
	Weight	Approximately 2 lb/0.9 kg		
	Electrical	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	
	Mechanical	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	Acoustics	50 dBA maximum sound pressure level	
		Environmental	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			

Technical Specifications

1.44-MB Diskette Drive	Diskette Size	3.5 in		
	LED Indicators (front panel)	Green		
	Read/Write Capacity per Diskette (high/low)	1.44 MB/720 KB		
	Drive Height	One-third		
	Drive Rotation	300 rpm		
	Transfer Rate (high/low)	500/250 Kb/s		
	Bytes/Sector	512		
	Sectors/Track (high/low)	18/9		
	Tracks/Side (high/low)	80/80		
	Access Times	Track-to-Track (high/low)	3/6 ms	
		Average (high/low)	94/173 ms	
		Settling Time	15 ms	
		Latency Average	100 ms	
	Cylinders (high/low)	80/80		
Read/Write Heads	Two			
Compaq 3-Button Mouse	Dimensions/Weight	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	
	Environmental	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)	
	Mechanical	Resolution	400 ± 20% DPI	
		Tracking Speed	10 in/s Maximum	
		Tracking Mechanism Life	300 miles/483 km at average speed of 10 in/s	
		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	
	Regulatory Approvals	Compliant	UL, CSA, FCC, CE Mark, TUV, TUV GS, VCCI, BSMI, C-Tick	

Technical Specifications

Ultra160 SCSI Hard Drives <i>250023-B21</i>	72 GB	Capacity	72,000 MB	
		Height	1 in/25.4mm	
		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	5.2 ms
			Full-Stroke	12 ms
			Rotational Speed	10,000 rpm
		Logical Blocks	142,264,000	
	Operating Temperature	50° to 95° F/10° to 35° C		
36 GB <i>250022-B21</i>		Capacity	36,400 MB	
		Height	1 in/25.4 mm	
		Width	4.0 in/101.6 mm	
		Interface	Ultra160 SCSI	
		Synchronous Transfer Rate (Maximum)	160 MB/s	
		Seek Time (typical reads, including settling)	Single Track	0.4 ms
			Average	4.7 ms
			Full-Stroke	7.0 ms
			Rotational Speed	15,000 rpm
		Logical Blocks	71,132,000	
	Operating Temperature	50° to 95° F/10° to 35° C		
36 GB <i>191189-B21</i>		Capacity	36,400 MB	
		Height	1.0 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	71,132,000	
	Operating Temperature	50° to 95° F/10° to 35° C		

Technical Specifications

Ultra160 SCSI Hard Drives <i>(continued)</i>	18 GB <i>191188-B21</i>	Capacity	18,209 MB
		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 0.8 ms Average 4.1 ms Full-Stroke 7.7 ms
			Rotational Speed 15,000 rpm
		Logical Blocks	35,566,000
		Operating Temperature	50° to 95° F/10° to 35° C
	18 GB <i>159764-B21</i>	Capacity	18,209 MB
		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 <i>250021-B21</i>	Capacity	120,000 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 Average 8.0 ms Full-Stroke 18.0 ms
			Rotational Speed 7200 rpm
		Logical Blocks	157,278,240
		Operating Temperature	41° to 131° F (5° to 55° C)
	80 GB <i>250020-B21</i>	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 Average 8.0 ms Full-Stroke 18.0 ms
			Rotational Speed 7200 rpm
		Logical Blocks	157,278,240
		Operating Temperature	41° to 131° F/5° to 55° C

Technical Specifications

Ultra ATA Hard Drives <i>(continued)</i>	40 GB	Capacity	40,000 MB	
	<i>201066-B21</i>	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	78,165,360	
		Operating Temperature	41° to 131° F/5° to 55° C	
		20 GB	Capacity	20,000 MB
		<i>251974-B21</i>	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	39,102,336		
	Operating Temperature	41° to 131° F/5° to 55° C		

Technical Specifications

4.7-GB DVD+RW Drive	Interface	Atapi IDE		
	Media formats written	CD-R, CD-RW, DVD+RW, DVD+R		
	Media capacity	4.7 GB DVD disc / 700 MB CD disc		
	Write methods	Disc-at-once, track-at-once, incremental fixed and variable packet		
	Recording/playing time	3 hours DVD (3.3 Mbps) / 80 minutes CD		
	Data transfer rates	Write	DVD+R write — 3247 KB/s (2.4X) DVD+RW write — 3247 KB/s (2.4X) CD-R write — 300 KB/s (2X) CD-R write — 600 KB/s (4X) CD-R write — 1200 KB/s (8X) CD-R write — 1,800 KB/s (12X) CD-RW write — 300 KB/s (2X) CD-RW write — 600 KB/s (4X) CD-RW write — 1500 KB/s (10X)	
		Read	Digital audio extraction (minimum) — 1,200 KB/s (8X) CD-ROM, CD-R, CD-RW read — up to 4,800 KB/s (32X) DVD-ROM, DVD+R, DVD+RW read — up to 10,800 KB/s (8X)	
	Data transfer modes	ATA PIO mode 4—16.7 Mbps ATA multi-word DMA mode 2—16.7 Mbps ATA UltraDMA mode 0—16.7 Mbps ATA UltraDMA mode 1—24 Mbps mode 2—33 Mbps (default)		
	Media formats read	CD CD-R/CD-ROM, CD-RW, CD-Digital Audio (Red Book) and CD Extra, CD-ROM (Mode 1 - Yellow Book), CD-ROM XA and CD-I (Mode 2/Form 1 - Green Book), CD-ROM XA and CD-I (Mode 2/Form 2 - Green Book), CD-Bridge and Photo-CD (single and multi-session), CD-Video, DVD-ROM, DVD+RW, DVD+R		
	Access times	Random	< 125 ms typical	
		Full stroke	< 250 ms typical	
	Start-up time	< 4 seconds typical		
	Buffer size	2 MB		
	Disc diameter	120 mm or 80 mm		
	Operating conditions	Temperature	41° to 104°F / 5° to 40°C	
		Humidity	10% to 90% (non-condensing)	
	Mounting orientation	Horizontal or vertical		
	Weight	0.9 kg/2.0 lb		
	Approvals/environmental	UL 1695 (US and Canada), CE, FDA, FCC, TUV, C-TICK		
	Software supplied	WinDVD 3.2 or later, Roxio Easy CD Creator 5.3 or later, DVD-It 2.5 or later		
	Operating systems supported	Microsoft Windows XP Professional, Microsoft Windows 2000 SP2		

Technical Specifications

Compaq 40X/12X/40X CD-Drive RW	Interface	Atapi IDE		
	Media formats written	CD-R and CD-RW		
	Media capacity	700 MB		
	Write methods	Disc-at-once, track-at-once, session-at-once, fixed packet, and variable packet		
	Recording/playing time	80 minutes		
	Data transfer rates	Sustained	CD-R write—6,000 Kbps (40X) (CLV) CD-RW write (1-4X media) —6,000 Kbps (4X) CD-RW write (4-10X media) —1,800 Kbps (12X) CD-RW read—6,000 Kbps (40X) CD-RW read—1,800 Kbps (12X) Digital audio extraction (minimum) —4,800 Kbps (32X)	
		Variable	CD-ROM, CD-R read—1,500 to 6,000 Kbps (10X to 40X) CD-R write – 2,400 to 6,000 Kbps (16X to 40X)	
	Data transfer modes	ATA PIO mode 4—16.7 Mbps		
		ATA multi-word DMA mode 2—16.7 Mbps		
		ATA UltraDMA mode 0—16.7 Mbps		
		ATA UltraDMA mode 1—24 Mbps mode 2—33 Mbps (default)		
	Media formats read	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	< 120 ms typical	
		Full stroke	< 200 ms typical	
Start-up time	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		
Disc diameter	120 mm or 80 mm			
Track pitch	1.6 µm			
Disc loading mechanism	Half-height, tray load			
Operating conditions	Temperature	Operating 41° to 113° F/5° to 45° C		
	Humidity	10% to 80%		
Mounting orientation	Horizontal or vertical			
Dimensions	Fits in a standard 5.25-inch drive bay			
Weight	1.2 kg (2.6 pounds)			
Approvals/environmental	UL 94 and 1950, CSA, CE, FDA			
Operating systems supported	Microsoft Windows XP, Microsoft Windows 2000, Microsoft Windows 98, Microsoft Windows NT 4.0			
Software supplied	Roxio Easy CD Creator			

Technical Specifications

48X CD-ROM Drive	Disk	Applicable Disk	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	
		Capacity	540 MB (Mode 1, 12 cm) 650 MB (Mode 2, 12 cm)	
		Rotational Speed	8750 maximum	
		Diameter	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	
		Track Pitch	1.6 µm	
		Block Size	Mode 1 Mode 2 CD-DA CD-XA	2,048 bytes 2,340, 2,336 bytes 2,352 bytes 2,328 bytes
		Interface	IDE	
		Access Times (typical)	Random Full-Stroke	< 100 ms < 150 ms
	Audio Output Level	Line-Out	0.7 VRMS	
	Data Transfer Rate	Sustained Variable	150 KB/s (1X, using audio disc) 3,000 to 7,200 KB/s	
	Cache Buffer	128 KB minimum		
	Start-up Time (typical)	< 7 s		
	Stop Time	< 4 s		
	Operating Conditions	Temperature Humidity	41° to 113° F/5° to 45° C 10% to 80%	
	Dimensions	(HxWxD, maximum) Weight	1.7 x 5.9 x 8.19 in/4.32 x 15 x 20.8 cm 2.65 lb/1.2 kg	

Technical Specifications

16X Combo CD-RW/DVD-ROM	Height	5.25-inch, half-height		
	Interface type	ATAPI		
	Dimensions— External, Excluding Bezel (W x H x D)	5.8 x 1.7 x 7.7 in/14.7 x 4.32 x 19.56 cm		
	Disc diameter	5 in, 3 in (12 cm, 8 cm)		
	Disc thickness	0.05 inch (1.2 mm)		
	Track pitch	1.6 μ m (CD), 0.74 μ m (DVD)		
	Disc center hole diameter	0.6 inch (15 mm)		
	Reference scanning velocity	1.2 m/s (CD); 3.49 m/s (DVD SL); 3.84 m/s (DVD DL)		
	Read only disc parameters	Formats and modes supported	CD-ROM—Mode 1; CD-ROM XA—Mode 2 (forms 1 and 2); CD-Bridge; 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; DVD-RW; DVD-RW Multi-Border; DVD+R; and DVD+RW	
		Capacity	540 MB (mode 1, 12 cm); 650 MB (mode 2, 12 cm); 700 MB (Mode 2, 12 cm); 180 MB (mode 2, 8 cm); 4.7 GB (DVD-5); 8.54 GB (DVD-9); 9.4 GB (DVD-10)	
		Block size	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 bytes; DVD—2,048 bytes	
		Writeable disc parameters	Disc type	CD-R and CD-RW
			Write methods	Disc at Once, Track at Once, Session at Once, Variable Packet, Fixed Packet
Format and modes supported	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; CD-Bridge			
Capacity	540 MB (mode 1, 12 cm); 650 MB (mode 2, 12 cm); 700 MB (mode 2, 12 cm); 180 MB (mode 2, 8 cm)			
Block size	CD-DA—2,352 bytes; mode 0— 2,336 and 2,352 bytes; mode 1—2,048 and 2,352 bytes; mode 2—2,336 and 2,352; mode 2, form 1— 2,048 and 2,352 bytes; mode 2, form 2—2,324 and 2,352 bytes			
Access times (typical reads, including settling)	Random DVD	< 130 ms (typical)		
	Random CD	< 110 ms, (typical)		
	Full stroke DVD	< 210 ms (seek)		
	Full stroke CD	< 180 ms (seek)		

Technical Specifications

16X Combo CD-RW/DVD-ROM (continued)	Data transfer rates	Sustained — CD-R write	600 KB/s (4X), 1800 KB/s (12X)
		Sustained — CD-RW write	600 KB/s (4X, 1-4X media), 1500 KB/s (10X, 4-10X media)
		Sustained — CD-RW read	1500 KB/s (10X)
		Sustained — Digital audio extraction (minimum)	1500 KB/s (32X)
		Variable — CD-R write	2400 KB/s (16X)
		Variable — CD-ROM, CD-R read	1500 – 6000 KB/s (10X to 40X)
		Variable — DVD ROM	8100 – 16,200 KB/s (12X)
		Variable — DVD Video	1352 – 3268 KB/s (2.4X)
		Variable — DVD-R, DVD-RW	1352 – 3268 KB/s (2.4X)
		Data transfer modes	ATA PIO mode 4 (16.7 MB/s); ATA Multi-word DMA mode 2 (16.7 MB/s); ATA UltraDMA mode 0 (16.7 MB/s); ATA UltraDMA mode 1 (24 MB/s), mode 2 (33 MB/s, default)
		Cache buffer	2 MB (minimum)
		Startup time (single)	< 7 seconds (typical)
		Startup time (multi-session)	< 30 seconds (typical)
		Stop time	< 4 seconds
	Power	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 (< 1000 mA typical, < 1500 mA maximum) 12 VDC (< 600 mA typical, < 1200 mA maximum)
		Total drive power (standby mode)	< 2.5 watt
	Audio Output Level	0.7 Vrms (typical)	
	Configuration Jumper Block	Master, slave, and cable select modes	
	Data interface connector	40-pin, shrouded and keyed, flat ribbon	
	Environmental (all conditions non-condensing)	Temperature (operating)	41° to 122° F/5° to 50° C
		Relative humidity (operating)	10% to 85%
		Maximum wet bulb temperature (operating)	86° F/30° C
	Certifications, requirements	MPC-3 compliant, multi-read requirements, ACA AS/NZS 3548, ANSI C63.4–1992, ATAPI Spec SFF-8020, ATA Spec X3T9.2, CB Bulletin No. 92A, CSA C22.2 No. 950-1995, C.I.S.P.R. Pub 22, EMKO-TSE 207/94, TUV or VDE EN60 950, EN60825-1, Microsoft PC2001 certification, Microsoft Logo for Windows XP, 2000, NT4, and 98	
	Operating systems supported	Microsoft Windows 98, Microsoft Windows NT 4.0, Microsoft Windows 2000, Windows XP	
		Note: MPEG video playback is not supported on Microsoft Windows NT.	

Technical Specifications

Compaq Premier•Sound featuring AC'97 Audio	Type	Embedded AC'97 2.1 Codec		
	Sound Quality	16-Bit Stereo Full-Duplex (CD Quality)		
	Sampling	Variable 7 kHz to 48 kHz		
	Audio Compression/Decompression	ESPCM and ADPCM compression		
	Full Scale Input Voltage (RMS)	Microphone Input	100 mVolts	
		Line Input	2.2 Volts	
	Full Scale Output Voltage (RMS)	Line Output	1.4 Volts	
		Impedance (nominal)	Line Output	800 ohms (typical)
		Line Input	10 Kohms (typical)	
	Playback (PC-D-A)	Dynamic Range	-91 dB (typical)	
		Total Harmonic Distortion+Noise	-69 dB (typical)	
		Frequency Response (-3 dB)	20 Hz to 20 kHz	
	Line Output Crosstalk (10 kHz)	-74 dB		
	Headphone Maximum Output (1 kHz)	60 mWrms into 32 ohms (THD+N < 1%)		
	Internal Power Amplifier Rating	Nominal: 1.5 Watts RMS @ 8 ohms		
Maximum: 5 Watts RMS @ 8 ohms				
Speaker	Frequency Response	200 Hz to 15 kHz		
	Equalizer	5 stages of fixed equalization		
	Design	High-performance, infinite baffle loudspeaker		
Connectors	Line-in, line-out, microphone-in, headphone-out			
Operating System Driver Support	Windows NT 4.0, Windows 98, Windows 2000 and Windows XP Professional			

Technical Specifications

Integrated Intel PRO/100 VM Network Connection	Interface	Intel SingleDriver technology (10/100 Mbps support)		
	Connectors	RJ-45		
	Expansion Bus Architecture	PCI 2.2		
	Power Management	ACPI 1.0		
	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	
	Data Interface	PCI, 32-bit bus mastering		
	I/O Address	Integrated connectivity with Intel I/O Controller Hub (ICH2)-based platforms		
	Standards Compliance	IEEE VLAN Support (802.1A)		
		IEEE 802.2		
		IEEE 802.3 & IEEE 802.3u (100-Mb/s Ethernet)		
		IEEE Intel Priority Packet (801.1p)		
Remote Wakeup	PME through PCI 2.2, no cable required			
Boot PROM Support	Yes, Intel PRO/100 Boot Agent (PXE 2.0, RPL)			
F12 BIOS Support	Yes			
Proactive Alert Technology	Yes, alert on LAN (transmit functionality only) requires management console software, such as HP OpenView. It also requires alert utilities for the management console, proxy client software, and client configuration software.			
Environmental Requirements				
Operating	Temperature	32° to 131° F/0° C to 55° C		
	Humidity (non-condensing)	85% at 131° F/55° C		
	Altitude	10,000 ft/3,048 m		
Nonoperating	Temperature	-40° to 158° F/-40° to 70° C		
	Altitude	50,000 ft/15,240 m		
OS Driver Support	Microsoft Windows NT 3.51 and 4.0			
	Microsoft Windows 95, 98, 2000, and Windows XP Professional			
	Novell Netware 3.11, 3.12, & 4.1x			
	5 Server Sun™ Solaris™			
	SCO UnixWare®			
	OpenDesktop OpenServer			
Software Support	Instrumentation support for CIM/WBEM SNMP, DMI, PXE 2.0, Intel PROSet utility for installation and configuration, Alert on LAN Software Developer Kit and same code			
Special Features	Digital adaptive equalization control, link status interrupt capability, boundary scan support, 3-port LED support (speed, link, activity), 10BASE-T auto polarity correction, diagnostic loopback mode, 1:1 transmit transformer ratio support, automatic detection of unplugged mode, remote monitoring (alerting)			

Technical Specifications

Matrox Millennium G550 AGP Graphics Controller	Form factor	Low profile (LP) board with ATX bracket attached (kit also includes a Small Form Factor (SFF) bracket)																								
	Bus type	AGP 4X, AGP 2X, and AGP 1X																								
	Standard memory	32-MB, high-speed DDR																								
	DAC speed	360-MHz RAMDAC; secondary 230-MHz RAMDAC																								
	Data path	64-bit DDR external bus to frame buffer memory/256-bit internal																								
	Internal bus width	256-bit DualBus																								
	Memory interface	64-bit DDR Memory																								
	Frame buffer	32 MB																								
	Operating systems supported	Microsoft Windows XP Professional and Home Edition, Microsoft Windows 2000, Microsoft Me, Microsoft Windows 95/98, Microsoft Windows NT 4.0, Linux®																								
	Two integrated RAMDACs	Yes																								
	Optional software bundles (not included)	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																								
	3-D engine acceleration	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.																								
	3-D features	<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>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>Microsoft DirectX support</td> <td>Yes</td> </tr> <tr> <td>OpenGL support</td> <td>Yes, through Matrox</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	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
Single cycle multi-texturing	Yes																									
Environment-mapped bump mapping	Yes																									
Internal rendering	32-bit																									
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Stencil buffering	Yes																									
AGP texturing	Yes																									
Trilinear filtering	Yes																									
Microsoft DirectX support	Yes																									
OpenGL support	Yes, through Matrox																									
	DualHead 3-D display features	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																								
	Other 3-D features	Alpha blending, fogging, specular highlighting, environment mapping, stencil buffering, triple buffering, AGP texturing																								
	Other	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																								
	Optional software bundles (not included)	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

Matrox Millennium G550 AGP Graphics Controller <i>(continued)</i>	DualHead configurations	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
	DualHead 2-D display features	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
	DualHead display technology chip specifications	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)		
Resolutions Supported	Maximum Colors Supported	Refresh Rates
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
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
Secondary Resolutions Supported	Maximum Color Depths (bpp)	Refresh Rates
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 Millennium G450 Graphics Controllers	Form Factor	ATX																									
	Bus Type	AGP 1X, 2X, 4X: PCI rev 2.2 bus specification																									
	Standard Memory	32 MB																									
	DAC Speed	360 MHz (secondary DAC: 200 MHz)																									
	Data Path	64-bit DDR External/256-bit Internal																									
	Internal Bus Width	256-bit DualBus																									
	Memory Interface	64-bit DDR Memory																									
	Frame Buffer	32 MB																									
	Two Integrated RAMDACs	Yes																									
	Engine Acceleration	3 ROP bitBLT, line draw, text, color expansion, basic video color conversion and scaling, triangle setup engine																									
	Output	Analog, 2 ports																									
	OS Support	Microsoft Windows 2000, Windows XP Professional, Windows 98 and Windows NT 4.0 available from Compaq.																									
	Other	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																									
	3D Features	<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
Single-cycle multi-texturing	Yes																										
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Stencil Buffering	Yes																										
AGP Texturing	Yes																										
Trilinear Filtering	Yes																										
DirectX Support	Yes																										
OpenGL Support	Yes																										
DualHead Display Features	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 Supported Modes

Controllers *(continued)*

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 2nd 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 <i>(available in single monitor configuration only)</i>
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

NVIDIA Quadro4 550 XGL Graphics Controller	3D/2D Controller	Integrated Quadro4 Pro 2D/3D 128-bit graphics processor unit (GPU)		
	VGA Controller	Integrated into the Quadro4 GPU		
	Bus Type	AGP4x		
	RAMDAC	350 MHz		
	Speed & Type	200 MHz 4Mx 32 DDR SDRAM		
	Memory Amount	64 MB		
	Controller Clock Speed	270 MHz		
	Color Planes	32-bit color buffer		
	Overlay Planes	1 16-bit Video overlay plane, software emulation for OpenGL overlay planes		
	Stencil Planes	8-bit stencil buffer		
	Alpha Planes	8-bit alpha buffer		
	Z-Buffer	24-bit		
	Total Bits/Pixel	64		
	Maximum Vertical Refresh Rate	120 Hz		
	Multi-Display Support	Yes		
	Operating Systems	Microsoft Windows 2000, and Microsoft Windows XP		
	Resolution	Maximum Colors Supported	Maximum Refresh Rate	
	640 x 480	16.7 M	120 Hz	
	800 x 600	16.7 M	120 Hz	
	1024 x 768	16.7 M	120 Hz	
1152 x 864	16.7 M	120 Hz		
1280 x 1024	16.7 M	120 Hz		
1600 x 1200	64 K	100 Hz		
1600 x 1200	16.7 M	85 Hz		
1920 x 1080	64 K	100 Hz		
1920 x 1080	16.7 M	75 Hz		
1920 x 1200	64 K	85 Hz		
1920 x 1200	16.7 M	70 Hz		
1920 x 1440	64 K	75 Hz		
1920 x 1440	16.7 M	60 Hz		
2048 x 1536	64 K	60 Hz		

Technical Specifications

NVIDIA Quadro4 750 XGL Graphics Controller	3D/2D Controller	Integrated Quadro4 2D/3D 128-bit graphics processor unit (GPU)		
	VGA Controller	Integrated into the Quadro4 GPU		
	Bus Type	AGP4x		
	RAMDAC	350 MHz		
	Speed & Type	275 MHz 4Mx32DDR 5ns		
	Memory Amount	64 to 128 MB		
	Controller Clock Speed	275 MHz		
	Color Planes	32-bit color buffer		
	Overlay Planes	1 16-bit Video overlay plane, software emulation for OpenGL overlay planes		
	Stencil Planes	8-bit stencil buffer		
	Alpha Planes	8-bit alpha buffer		
	Z-Buffer	24-bit		
	Total Bits/Pixel	64		
	Maximum Vertical Refresh Rate	120 Hz		
	Multi-Display Support	Yes		
	Operating Systems	Microsoft Windows 2000 and Microsoft Windows XP		
	Resolution	Maximum Colors Supported	Maximum Refresh Rate	
	640 x 480	16.7 M	120 Hz	
	800 x 600	16.7 M	120 Hz	
	1024 x 768	16.7 M	120 Hz	
	1152 x 864	16.7 M	120 Hz	
	1280 x 1024	16.7 M	120 Hz	
	1600 x 1200	64 K	100 Hz	
1600 x 1200	16.7 M	85 Hz		
1920 x 1080	64 K	100 Hz		
1920 x 1080	16.7 M	75 Hz		
1920 x 1200	64 K	85 Hz		
1920 x 1200	16.7 M	70 Hz		
1920 x 1440	64 K	75 Hz		
1920 x 1440	16.7 M	60 Hz		
2048 x 1536	64 K	60 Hz		

Technical Specifications

NVIDIA Quadro4 900 XGL Graphics Controller	3D/2D Controller	Integrated Quadro4 2D/3D 128-bit graphics processor unit (GPU)		
	VGA Controller	Integrated into the Quadro4 GPU		
	Bus Type	AGP4x		
	RAMDAC	350 MHz		
	Speed & Type	325MHz 4Mx32DDR 5ns		
	Memory Amount	128 MB		
	Controller Clock Speed	300 MHz		
	Color Planes	32-bit color buffer		
	Overlay Planes	1 16-bit Video overlay plane, software emulation for OpenGL overlay planes		
	Stencil Planes	8-bit stencil buffer		
	Alpha Planes	8-bit alpha buffer		
	Z-Buffer	24-bit		
	Total Bits/Pixel	64		
	Maximum Vertical Refresh Rate	120 Hz		
	Multi-Display Support	Yes		
	Operating Systems	Microsoft Windows 2000, and Microsoft Windows XP		
	Resolution	Maximum Colors Supported	Maximum Refresh Rate	
	640 x 480	16.7 M	120 Hz	
	800 x 600	16.7 M	120 Hz	
	1024 x 768	16.7 M	120 Hz	
1152 x 864	16.7 M	120 Hz		
1280 x 1024	16.7 M	120 Hz		
1600 x 1200	64 K	100 Hz		
1600 x 1200	16.7 M	85 Hz		
1920 x 1080	64 K	100 Hz		
1920 x 1080	16.7 M	75 Hz		
1920 x 1200	64 K	85 Hz		
1920 x 1200	16.7 M	70 Hz		
1920 x 1440	64 K	75 Hz		
1920 x 1440	16.7 M	60 Hz		
2048 x 1536	64 K	60 Hz		

Technical Specifications

NVIDIA Quadro4 200 NVS Graphics Controller	3D/2D Controller	Integrated Quadro4 2D/3D 128-bit graphics processor unit (GPU)		
	VGA Controller	Integrated into the Quadro4 GPU		
	Bus type	AGP4x		
	RAMDAC	Dual 350 MHz		
	Memory speed and type	166MHz 4Mx16 SDR 6ns		
	Memory amount	64 MB		
	Texture memory	Unified with frame buffer		
	Form factor	ATX and SFF		
	Controller clock speed	250 MHz		
	Color planes	32-bit color buffer		
	Overlay planes	1 16-bit Video overlay plane, software emulation for OpenGL overlay planes		
	Stencil planes	8-bit stencil buffer		
	Alpha planes	8-bit alpha buffer		
	Z-buffer	24-bit		
	Total bits/pixel	64		
	Maximum vertical refresh rate	120 MHz		
	Maximum pixel clock	350 MHz		
	Dual screen support	Yes, with nView		
	Single DVI support	Yes		
	Dual DVI support	Yes		
	Operating systems	Microsoft Windows XP and Windows 2000		
	nView hardware architecture	32-bit color 2048 x 1536 @ 60 Hz maximum resolution 2D rendering engine optimized for 32-, 24-, 16-, 15-, and 8-bpp modes		
	High-definition video processor (HDVP)	Full-screen, full-frame video playback of HDTV and DVD content DVD-ready motion compensation for MPEG-2 Independent hardware color controls for video overlay Hardware color-space conversion (YUV 4:2:2 and 4:2:0) IDCT motion compensation 5-tap horizontal by 3-tap vertical filtering 8:1 up/down scaling		
	Resolution	Maximum Colors Supported	Maximum Refresh Rate	
	640 x 480	16.7 M	120 Hz	
800 x 600	16.7 M	120 Hz		
1024 x 768	16.7 M	120 Hz		
1152 x 864	16.7 M	120 Hz		
1280 x 1024	16.7 M	120 Hz		
1600 x 1200	64 K	100 Hz		
1600 x 1200	16.7 M	85 Hz		
1920 x 1080	64 K	100 Hz		
1920 x 1080	16.7 M	75 Hz		
1920 x 1200	64 K	85 Hz		
1920 x 1200	16.7 M	70 Hz		
1920 x 1440	64 K	75 Hz		
1920 x 1440	16.7M	60 Hz		
2048 x 1536	64 K	60 Hz		

Technical Specifications

NVIDIA Quadro4 400 NVS Graphics Controller	3D/2D Controller	Integrated Quadro4 2D/3D 128-bit graphics processor unit (GPU)
	VGA Controller	Integrated into the Quadro4 GPU
	Bus Type	PCI
	RAMDAC	Dual 350 MHz
	Memory Speed, Type, Capacity	220 MHz, 4mx 32 DDR per GPU, 32 MB per GPU, 64 MB total
	Texture Memory	Unified with frame buffer
	Form Factor	ATX
	Controller Clock Speed	220 MHz
	Color Planes	32-bit color buffer
	Overlay Planes	1 16-bit Video overlay plane, software emulation for OpenGL overlay planes
	Stencil Planes	8-bit stencil buffer
	Alpha Planes	8-bit alpha buffer
	Z-buffer	24-bit
	Total bits/pixel	64
	Maximum Vertical Refresh Rate	120 MHz
	Maximum Pixel Clock	343 MHz based on resolutions shown below
	Multi Screen VGA Support	Yes, 1 to 4 displays with nView
	Single DVI Support	Yes
	Multi screen DVI Support	Yes, 1 to 4 displays
	Operating Systems	Microsoft Windows XP, Microsoft Windows 2000
	nView Hardware Architecture	32-bit color 2048 x 1536 @ 60 Hz maximum resolution 2D rendering engine optimized for 32-, 24-, 16-, 15-, and 8-bpp modes
	High-definition Video Processor (HDVP)	Full-screen, full-frame video playback of HDTV and DVD content DVD-ready motion compensation for MPEG-2 Independent hardware color controls for video overlay Hardware color-space conversion (YUV 4:2:2 and 4:2:0) IDCT motion compensation 5-tap horizontal by 3-tap vertical filtering 8:1 up/down scaling

Technical Specifications

NVIDIA Quadro4 400 NVS (continued)	Resolution	Maximum Colors Supported	Maximum Refresh Rate
	640 x 480	16.7 M	120 Hz
	800 x 600	16.7 M	120 Hz
	1024 x 768	16.7 M	120 Hz
	1152 x 864	16.7 M	120 Hz
	1280 x 1024	16.7 M	120 Hz
	1600 x 1200	64 K	100 Hz
	1600 x 1200	16.7 M	85 Hz
	1920 x 1080	64 K	100 Hz
	1920 x 1080	16.7 M	75 Hz
	1920 x 1200	64 K	85 Hz
	1920 x 1200	16.7 M	70 Hz
	1920 x 1440	64 K	75Hz
	1920 x 1440	16.7M	60Hz
	2048 x 1536	64 K	60Hz

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
Dimensions (LxHxW)	Approximately 6.5 x 2.5 x 0.6 in/16.5 x 6.4 x 1.5 cm			
3D/2D Controller	Integrated Quadro2 EX 2D/3D 128-bit graphics processor unit (GPU)			
VGA Controller	Integrated into the Quadro2 EX GPU			
Bus Type	AGP 2X, 4X			
RAMDAC	350 MHz			
Memory Type	183 MHz SDR 2Mx32			
Memory Amount	32 MB			
Memory Speed	166 MHz			
Controller Clock Speed	175 MHz			
Color Planes	32-bit color buffer			
Overlay Planes	One 16-bit Video overlay plane, software emulation for OpenGL overlay planes			
Stencil Planes	8-bit stencil buffer			
Alpha Planes	8-bit alpha buffer			
Z-buffer	24-bit Z buffer			
Total bits/pixel	64-bits			
Maximum Vertical Refresh Rate	240 Hz			
Maximum Pixel Clock	350 MHz			
Multi-display support	No			
Operating Systems	Microsoft Windows 2000, Windows XP Professional and Windows NT 4.0 available from Compaq			

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

Technical Specifications

ATI Fire GL8800 Graphics Accelerator	Form Factor	ATX		
	Graphics Controller	RADEON™ 8800		
	Bus Type	AGP 4x		
	RAMDAC	400 MHz/30-bit		
	Memory Speed & Type	300MHz 4Mx32 DDR SGRAM 3.3ns		
	Memory Amount	128 MB		
	Controller Clock Speed	275 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		
	Monitor	15-pin D-type analog		
	Flat Panel Interface	DVI-I digital (supported resolutions up to 1600 x 1200)		
	Video Timings Compliance	VESA DMT 1.0 and VESA GTF 1.0 specifications		
	Maximum Vertical Refresh Rate	100 Hz/120 Hz when quad buffer stereo is enabled		
	Operating Systems	Microsoft Windows XP and Microsoft Windows 2000		
	Analog or digital monitor with 15-pin VGA connector - single monitor			
	Resolution	Line Frequency (kHz)	Refresh Rate (Hz)	Color Depth (bits)
640 x 480	31.5, 37.5, 43.3, 50.9	60, 75, 85, 100	16/32	
800 x 600	37.7, 46.9, 54.1, 63.9	60, 75, 85, 100	16/32	
1024 x 768	48.4, 60.0, 68.7, 80.8	60, 75, 85, 100	16/32	
1152 x 864	53.7, 67.5, 77.1, 91.5	60, 75, 85, 100	16/32	
1280 x 960	60.0, 75.1, 85.7, 101.7	60, 75, 85, 100	16/32	
1280 x 1024	64.0, 80.0, 91.1, 107.0	60, 75, 85, 100	16/32	
1600 x 1000	62.1, 78.3, 89.2, 105.9	60, 75, 85, 100	16/32	
1600 x 1024*	63.6, 80.2, 81.3, 91.4, 107.5	60, 75, 76, 85, 100	16/32	
1600 x 1200	75.0, 93.8, 106.3	60, 75, 85, 100	16/32	
1792 x 1344	83.6, 106.3, 119.9	60, 75, 85	16/32	
1920x1080**	67.1, 84.6, 96.4, 114.4	60, 75, 85, 100	16/32	
1920 x 1200*	74.5, 94.0, 95.0, 107.1, 127.1	60, 75, 76, 85, 100	16/32	
2048 x 1536	95.3, 120.2	60, 75	16/32	

* = Wide Screen Aspect Ratio Mode (16:10).

** = Wide Screen Aspect Ratio Mode (16:9).

Note: All drivers can be found on the Compaq Web site at:
<http://www.compaq.com/support/files/workstations/us/index.html>

Note: This web site is available in English only.

Compaq PCs use genuine Microsoft® Windows®
<http://www.microsoft.com/piracy/howtotell>

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