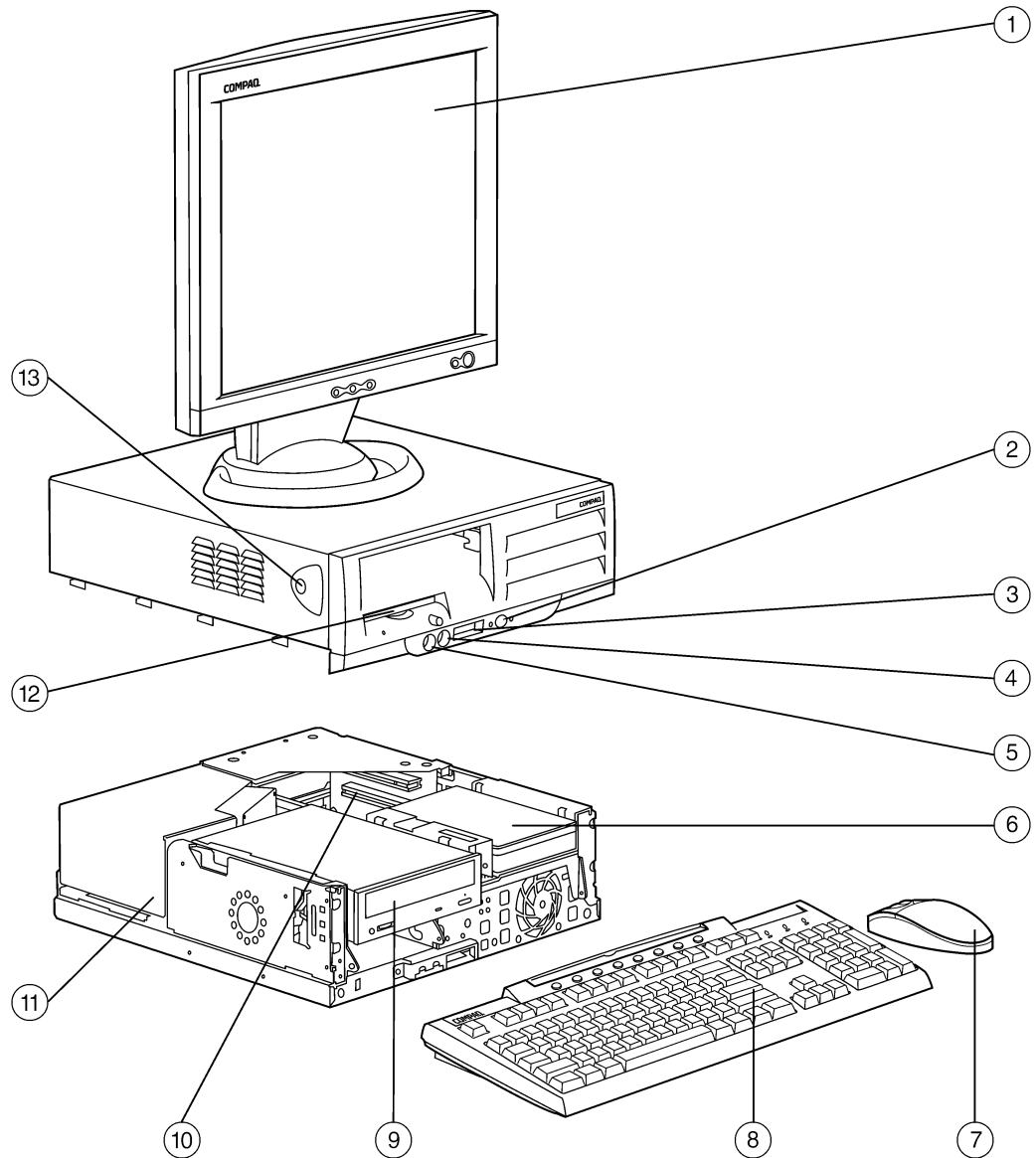


Overview

At A Glance

- Small Form Factor, convertible via tower stand
- Supports single Pentium 4 processor at speeds of 1.5 or 2.0 GHz. (400 MHz Front Side Bus)
- Intel 845 chipset with 400-MHz front side bus
- 256-KB L2 cache integrated on processor
- PC133 ECC SDRAM expandable to 1.5 GB
- High-performance, Ultra ATA 7200rpm, 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 72 GB of high-performance internal storage
- Choice of NVIDIA® Quadro2 EX, Matrox® Millennium G550, or Matrox G200 Quad Multi-monitor Series
- Multiple display support
- Integrated Intel PRO/100 VM Network Connection
- Three total slots (two PCI and one low-profile AGP 4X)
- Three bays (one external, one internal, and one floppy)
- 48X Max CD-ROM Drive, DVD-ROM or CD-RW drive (depending on model)
- Two front USB ports and two front audio ports
- Integrated AC'97 audio with internal speaker
- 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. TFT Monitor (sold separately)
2. Dual-State Power Button
3. USB Connectors
4. Headphone Connector
5. Microphone Connector
6. Hard Disk Drive
7. 3-Button Mouse

8. Easy Access Keyboard
9. CD-ROM, CD-RW or DVD-ROM Drive
10. Expansion Slots
11. 145-Watt Power Supply
12. 1.44-MB Diskette Drive
13. Quick Release Cover Latch

Standard Features – Custom Configuration 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	Intel Pentium 4 processor 1.5 GHz Intel Pentium 4 processor 2.0 GHz	
Cache Memory	256-KB Level 2 cache standard	
Upgradability	Upgradeable memory, graphics, and hard drives	
Memory	Maximum	1.5 GB of PC133 ECC SDRAM (3 slots)
Network Controller	Integrated Intel PRO/100 VM Network Connection	
Expansion Slots	I/O (Total/Available)	3/1
	PCI	2/1
	AGP 4X (Low Profile)	1/1 (depending on model)
	Note: Either a PCI slot or the AGP slot will always be filled by a graphics controller	
Expansion Bays	(Total/Available)	3/0
	Internal	1/0
	External	1/0
	Floppy	1/0
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) 18.2-GB Ultra160 SCSI (15,000 rpm) 60-GB, 40-GB or 20-GB Ultra ATA/100 (7200 rpm)
	Removable Storage	16X/10X/4X CD-RW Drive 250-MB ATAPI ZIP
Interfaces	Parallel	1 (front)
	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)
Graphics	NVIDIA Quadro2 EX (AGP) Matrox Millennium G550 (AGP) Matrox G200 Quad Multi-monitor Series (PCI)	
<i>One of the following:</i>		

Options

Memory (SDRAM)	512-MB Memory Module (PC133 ECC SDRAM)	254873-B21
	256-MB Memory Module (PC133 ECC SDRAM)	254872-B21
	128-MB Memory Module (PC133 ECC SDRAM)	254871-B21
	Note: Do not mix ECC and non-ECC memory.	
Monitors	TFT8030 Flat Panel Color (18-inch, Two-tone)	234362-001
	TFT5030 Flat Panel Color (15-inch, Two-tone)	228134-001
	TFT5015 Flat Panel Color (15-inch, Multimedia)	234046-001
	TFT5015 Flat Panel Color (15-inch, Two-tone)	234044-001
	P1210 CRT (22-inch, Two-tone)	230538-001
	P910 CRT (19-inch, Two-tone)	230535-001
	S920 CRT (19-inch, Two-tone)	240326-xxx
	V720 CRT (17-inch, Two-tone)	232944-xxx
	S720 CRT (17-inch, Two-tone)	239287-xxx
	S710 CRT (17-inch, Carbon)	154499-002
	V570 CRT (15-inch, Two-tone)	228113-xxx
Note: AssetControl monitor. AssetControl features are accessible with Compaq Workstations featuring Intelligent Manageability.		
Graphics	Matrox G200 Quad Multi-monitor Series with cables for analog output (PCI)	159513-B21
	Matrox G200 Quad Multi-monitor Series with cables for DVI output (PCI)	179597-B21
	Matrox G200 Quad MMS DVI Upgrade Cable Kit (for option kit 159513-B21)	170840-B21
	Matrox Millennium G550 (AGP) DH AGP DVI/VGA	250227-B21
	NVIDIA Quadro2 EX (AGP) (low profile)	250066-B21
Diskette Drives	250-MB ATAPI ZIP (carbon)	294416-B22
	250-MB ATAPI ZIP Media 3-Pack	217896-B21
Tape Drives	TR5 10/20 GB	294293-B22
	TR5 10/20 GB Media 3-Pack	125782-B21
	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-B22
	VXA-1 Cleaning Cartridge	237110-B22
Hard Drives	Ultra3 (Ultra160) SCSI Drives	
	72-GB Ultra160 SCSI 10,000 rpm (1.0")	250023-B21
	36.4-GB Ultra160 SCSI 10,000 rpm	191189-B21
	18.2-GB Ultra160 SCSI 15,000 rpm	191188-B21
	18.2-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
	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 and Quiet Idle	251974-B21

Options

Storage Controllers	Adaptec 29160N Ultra160 Single Channel SCSI Controller	157810-B21
Biometrics	USB Biometric ID Device	240238-B21
Multimedia	Labtec Spin-22 Carbon Speakers (NA)	246637-001
	Labtec Spin-22 Carbon Speakers (EMEA)	246637-022
	Labtec Spin-22 Carbon Speakers (APD)	246637-031
	48X CD-ROM (carbon)	187217-B22
	16X/40X DVD-ROM (carbon)	237495-B22
	16X/10X/4X 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
	8X Combo Drive CD-RW & DVD-ROM (carbon)	244885-B22
	1394 DVE Adobe kit	229966-B21
Communications	Intel PRO/100+ Management Adapter w/ IPSecurity	212953-B21
	Intel PRO/100+ Management Adapter w/ IPSecurity 20 pack	212954-B21
	Compaq WL215 Wireless USB	191810-B21
	V.90 56K PCI WIN Modem (available World Wide)	225745-xx1
Uninterruptible Power Systems	Compaq Tower UPS Model T1500h (high voltage, not available in North America)	242688-004
	Compaq Tower UPS Model T1500 (low voltage)	242688-003
	Compaq Tower UPS Model T1000h (high voltage, not available in North America)	242688-002
	Compaq Tower UPS Model T1000 (low voltage)	242688-001
	Compaq Tower UPS Model T700h (high voltage, not available in North America)	295372-B22
	Compaq Tower UPS Model T700 (low voltage)	295372-B21
Other	Compaq Scroll Mouse (carbon)	170299-B22
	External SCSI Adapter 68-/50-Pin	270187-B21
	Easy Access Keyboard (carbon)	202109-xx8
	Sliding Shelf Kit for Rack	332564-B21
	Solenoid Hood Lock/Sensor	252076-B21
	Tower Stand	234489-B21
	Spaceball 4000 3D Motion Controller (carbon)	112138-B22
	Compaq Basic Smart Card Keyboard (L2 Security) (carbon)	115506-xx8
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 PC133 ECC SDRAM is standard.

STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1,152 MB of PC133 ECC SDRAM is available with the installation of optional Memory Kits.

STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

Support for up to 1.5 GB of PC133 ECC SDRAM is available with the removal of the standard 128-MB PC133 ECC SDRAM module and the installation of optional Memory Kits.

Following are memory options available from Compaq:

- 512-MB Memory Kit (PC133 ECC SDRAM) 254873-B21
- 256-MB Memory Kit (PC133 ECC SDRAM) 254872-B21
- 128-MB Memory Kit (PC133 ECC SDRAM) 254871-B21

Memory

Compaq Evo Workstation W4000 (256 MB)

STANDARD MEMORY

256-MB of PC133 ECC SDRAM is standard.

STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1,280 MB of PC133 ECC SDRAM is available with the installation of optional Memory Kits.

STANDARD MEMORY REPLACED WITH OPTIONAL MEMORY

Support for up to 1.5 GB of PC133 ECC SDRAM is available with the removal of the standard 256-MB PC133 ECC SDRAM module and the installation of optional Memory Kits.

Following are memory options available from Compaq:

- 512-MB Memory Kit (PC133 ECC SDRAM) 254873-B21
- 256-MB Memory Kit (PC133 ECC SDRAM) 254872-B21
- 128-MB Memory Kit (PC133 ECC SDRAM) 254871-B21

Memory

Compaq Evo Workstation W4000 (512 MB)

STANDARD MEMORY

512 MB of PC133 ECC SDRAM is standard.

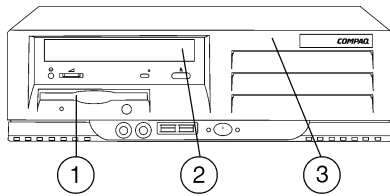
STANDARD MEMORY PLUS OPTIONAL MEMORY

Support for up to 1.5 GB of PC133 ECC SDRAM.

Following are memory options available from Compaq:

- 512-MB Memory Kit (PC133 ECC SDRAM) 254873-B21
- 256-MB Memory Kit (PC133 ECC SDRAM) 254872-B21
- 128-MB Memory Kit (PC133 ECC SDRAM) 254871-B21

Storage



DRIVE SUPPORT

	Quantity Supported	Position Supported	Controller
Removable Media			
1.44-MB Diskette Drive	Up to 1	1	Integrated
CD-ROM Drive	Up to 1	2	Integrated EIDE
250-MB ATAPI ZIP Drive	Up to 1	2	Integrated EIDE
DVD-ROM Drive	Up to 1	2	Integrated EIDE
CD-RW Drive	Up to 1	2	Integrated EIDE
4.7-GB DVD-RAM Drive	Up to 1	2	Integrated EIDE
Combo Drive CD-RW & DVD-ROM	Up to 1	2	Integrated EIDE
TR5 10/20-GB tape drive	Up to 1	2	Integrated EIDE
33/66GB VXA-1 IDE tape drive	Up to 1	2	Integrated EIDE
33/66GB VXA-1 SCSI tape drive	Up to 1	2	Ultra160 SCSI Controller (PCI)
Hard Drives			
<i>Ultra3 (Ultra 160) SCSI Drives</i>			
1-inch	Up to 1	3	Ultra160 SCSI Controller (PCI)
72-GB 10,000 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 1	3	Integrated EIDE
60-GB 7200 rpm			
40-GB 7200 rpm			
20-GB 7200 rpm			
Maximum Storage Capacity			
Internal	72 GB		

Technical Specifications

System Unit	Tower Dimensions (HxWxD)	3.9 x 13.1 x 14.4 in/9.9 x 33.3 x 36.6 cm		
	Weight (standard configuration)	20 lbs/9.1 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	3A @ 115 VAC; 1.5A @ 230 VAC	
		Maximum Rated Power	175-Watt output	
		Physical Dimensions	5.4 x 2.64 x 6.55 in/13.7 x 6.7 x 16.6 cm	
		Weight	3.15 lbs/2.05 kg	
	Temperature (Values are subject to change)	Operating	50° to 95°F/10° to 35°C	
		Non-operating	-22° to 140°F/-30° to 60°C	
	Humidity (non-condensing) (Values are subject to change)	Operating	10% to 90%	
		Non-operating	5% to 95%	
Maximum Altitude (unpressurized)	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/465 x 160 x 36 mm		
	Weight	Approximately 2 lbs/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	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			
Non-operating Vibration	4 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	
		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	72 GB	Capacity	72,000 MB	
	<i>250023-B21</i>	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		

	36.4 GB	Capacity	36,400 MB	
	<i>191189-B21</i>	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	

	18.2 GB	Capacity	18,209 MB	
	<i>191188-B21</i>	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	

	18.2 GB	Capacity	18,209 MB	
	<i>159764-B21</i>	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	

Technical Specifications

Ultra ATA Hard Drives	60 GB	Capacity	60,000 MB	
	<i>230253-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	117,231,408	
	Operating Temperature	41° to 131°F/5° to 55°C		
	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

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
	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/4.29 x 15 x 20.8 cm 2.65 lbs/1.2 kg

Technical Specifications

16X/40X DVD-ROM Drive with RAM Read	Bus	Ultra DMA 33
Data Transfer Rate (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
Disk Rotation Technology		DVD: CAV -Constant Angular Velocity CD: CAV - Constant Angular Velocity
Access Time (ms)	Random	DVD = <100 ms; CDROM = < 80 ms
	Full Stroke Seek	DVD = <240 ms; CDROM = <160 ms
Cache Buffer Standard / Max	512 KB	
ATAPI Interface	ATAPI	
Disk Formats Read	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
Disk Formats Written	None	
Disk	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

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

Technical Specifications

Integrated Intel PRO/100 VM Network Connection	Connectors	RJ-45	
	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		
Standards Compliance	IEEE 802.2, IEEE 802.3 and IEEE 802.3u, (100-Mbps ethernet), SCO UnixWare OpenDesktop and OpenServer, PC'99		
OS Driver Support	Microsoft Windows NT 3.51 and 4.0 Microsoft Windows 95, 98 and 2000 Beta Novell Netware 3.11, 3.12 & 4.1x, 5 Server Sun Solaris™ SCO UnixWare OpenDesktop OpenServer		
Remote Wakeup	Yes, (PME# and WAKE signals) - no cable required on 810 or 820 chipset platforms		
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.		
Boot PROM support	Yes, Intel PRO/100 Boot Agent (PXE 2.0, RPL)		
F12 BIOS Support	Yes		
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	
Non-Operating	Temperature	-40° to 158° F/-40° to 70° C	
	Altitude	5,000 ft/15,240 m	

Technical Specifications

Matrox G200 Quad Multi-Monitor Series (MMS) Graphics Controller	Dimensions (HxW)	4.5x8 in/11.43x20.32 cm		
	Refresh Rate (per display)			
	Aspect Ratio	Resolution	Vertical	Horizontal
	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.				
Interface	PCI			
Standard Memory	32-MB SGRAM (8 MB per port)			
DAC Speed	250 MHz			
Data Path	128-bit Internal/64-bit External			
Color Space Conversion	Yes			
Scaling	Yes			
Quick Draw Support	Yes			
DCI & DirectX Video Playback	Yes			
Direct3D Support	Yes			
Engine Acceleration	3 ROP bitBLT, Line Draw, Text, Color Expansion, Basic Video Color Conversion and Scaling, Triangle Setup Engine			
Output	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		
Other	PCI bus-mastering, texture mapping support, flat and Gouraud shading, Anisotropic Filter, perspective texture, specular highlighting, dithering, full scene anti-aliasing, Vertex fog			
OS Support	Windows 2000 and Windows NT 4.0			

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 2000, Microsoft Windows 98, Microsoft Windows NT 4.0																								
	Two integrated RAMDACs	Yes																								
	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
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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 (continued)	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	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
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

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	10.5 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 NT 4.0 available from Compaq			

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