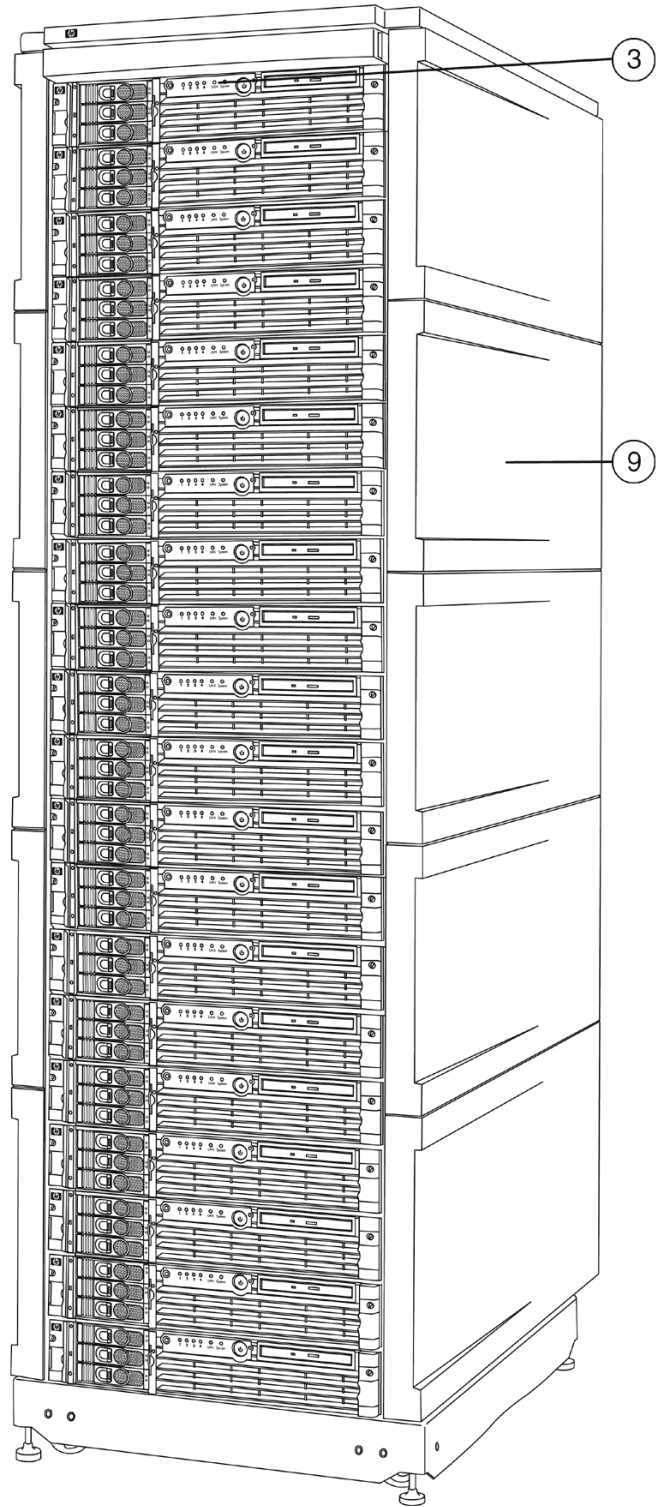
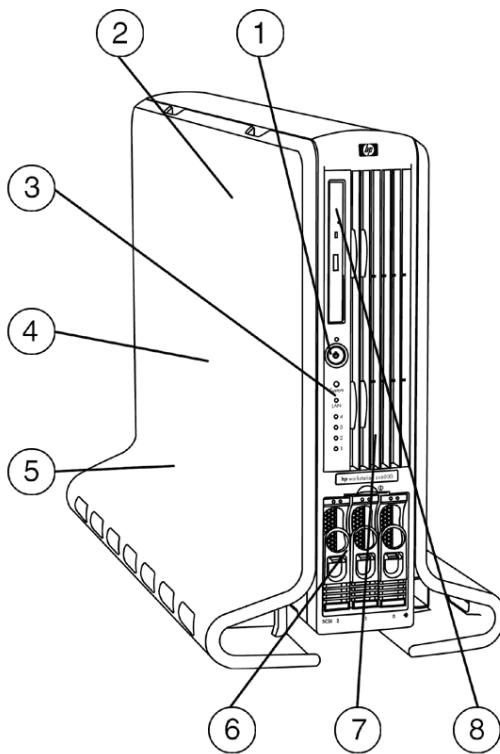
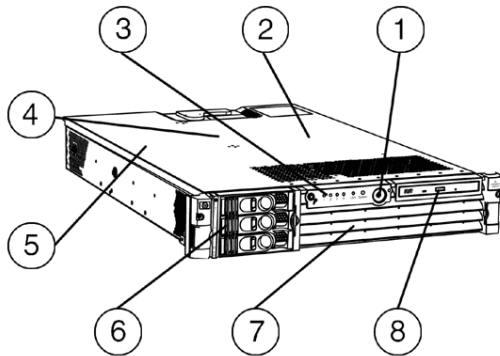


### Overview



1. On/Off Button
2. Processor(s)
3. Status/diagnostic LEDs
4. Memory DIMMs
5. Expansion card cage

6. Hard disk drives
7. Power supply
8. Optical drive
9. 20 systems in a 2-meter rack

### Overview

#### At A Glance

- Up to two Intel® Itanium 2 processors,
  - 1.3GHz or 1.5GHz
  - Up to 6 MB L3 onboard cache
  - HP zx1 chipset with 400 MHz system bus
- Support for three enterprise-class operating systems:
  - HP-UX 11i v2.0
  - Red Hat Linux Advanced Workstation 2.1
  - HP Linux Installation Kit
- ECC PC2100 DDR-266 memory, expandable to 24 GB
- Ultra320 SCSI hard drives, with up to 438 GB of internal storage
- Choice of leadership graphics:
  - ATI RADEON 7000
  - ATI FireGL Z1-128p
  - NVIDIA Quadro4 980 XGL
  - ATI FireGL X1-256p
- Integrated Ethernet adapters: Intel 82550C (10/100 Mbps) and Broadcom 5701 (10/100/1000 Mbps)
- AGP 4X Pro50 graphics interface
- Three available PCI slots
- Four external bays (one slimline and three hot-pluggable)
- DVD-ROM Slimline or DVD-ROM/CD-RW Combo Drive
- Full Independent Software Vendor (ISV) certification and support for leading technical applications
- Protected by HP Services, including a one-year limited warranty. For details, consult the Product Information Centre at 1-888-882-6672.

### Standard Features

<b>Processor</b>	Up to two Intel Itanium 2 processors – 1.3 GHz, or 1.5 GHz (400 MHz system bus)	
<b>Operating System</b>	HP-UX 11i v2.0 Red Hat Linux Advanced Workstation 2.1 HP Linux Installation Kit	
<b>Cache Memory</b>	3 MB L3 on-chip cache (1.3 GHz processor) 6 MB L3 on-chip cache (1.5 GHz processor)	
<b>Memory</b>	Maximum of 24 GB ECC PC2100 DDR-266 memory (12 DIMMs)	
<b>Network Controller</b>	Integrated Intel 82550C Wake-on-LAN 10/100 Mbps Ethernet Network Interface Broadcom 5701 10/100/1000 Mbps Ethernet Network Interface	
<b>Expansion Slots</b>	I/O (Total) PCI - 32-bit/33 MHz AGP 4X Pro 50	Four available slots 3 full-length 64-bit/133 MHz PCI-X 1 slot – 32-bit/66 MHz 1.5V 1.06 GB/s
<b>Expansion Bays</b>	(Total/Available) External	4 total/2 available Three hot-pluggable 3.5 inch bays One slimline 5.25 inch bay
<b>Storage</b>	Removable Media Hard Drive	DVD+RW Slimline, DVD-ROM Slimline, or DVD-ROM/CD-RW Slimline Combo Drive 36 GB or 146 GB Ultra320 SCSI (10K rpm) 36 GB or 73 GB Ultra320 SCSI (15K rpm)
<b>Interfaces</b>	USB 2.0 (1.1 compatible) Serial Ultra320 SCSI Network interface Microphone Jack Line-In Jack Line-Out Jack	Four (2 front, 2 rear) Two 9-pin DIN connectors (rear) Internal and external (rear) connectors Two RJ-45 connectors (rear) 1 (front) 1 (rear) 1 (rear)
<b>Graphics</b> <i>Choose from:</i>	ATI RADEON 7000 ATI FireGL Z1-128p (2 slots) NVIDIA Quadro4 980 XGL ATI FireGL X1-256p (2 slots)	
<b>Audio</b>	AC97/16-bit stereo full-duplex	

### Standard Features

---

**Remote Management** Baseboard management controller (integrated) allows power and reset management, health management, event logging and reporting, hardware and data protection, and highly available management console. Management processor card (optional) manages resources, diagnostics, system repair, 2D graphics console, and 10/100Base-T LAN for out-of-band management.

---

**Power Supply** 650W maximum output  
Optional hot-swap 2nd power supply for n+1 redundancy

---

**Service and Support** Standard limited warranty: 1 year next business day onsite  
Hardware support upgrades available: 3 Years Next Business Day Onsite, 3 Years Same Business Day Onsite, and 3 Years 24 x7 Onsite.  
Telephone support upgrade available: 3 Years telephone support for LINUX operating system.  
**NOTE:** Certain restrictions and exclusions may apply. For details, consult the Product Information Centre at 1-888-882-6672.

### *HP Workstation zx6000 Base System*

**HP Workstation zx6000 Base Unit (Partner Prime and Partner Direct)**

DM487AV

---

**HP Workstation zx6000 with 1.3 GHz Processor (HIP Partner)**

A9664A

---

**HP Workstation zx6000 with 1.5 GHz Processor (HIP Partner)**

A9665A

---

### Standard Features Pre-Configured Regional Models

<b>zx6000/2x900/2/36/ GL4/U</b> A9373BF#ABA	<b>Processor</b>	Dual Intel Itanium 2 processors. 900 MHz
	<b>Cache Memory</b>	1.5MB L3
	<b>Memory</b>	2 GB ECC PC2100 DDR-266 (4x512 MB)
	<b>Optical Drive</b>	DVD-ROM drive
	<b>Hard Drive</b>	36 GB Ultra320 SCSI 10K rpm
	<b>Graphics</b>	ATI Fire GL4
	<b>Mouse</b>	HP scroll mouse
	<b>OS</b>	HP-UX 11i TCOE

<b>zx6000/2x900/2/36/ R7/U</b> A9372BF#ABA	<b>Processor</b>	Dual Intel Itanium 2 processors. 900 MHz
	<b>Cache Memory</b>	1.5MB L3
	<b>Memory</b>	2 GB ECC PC2100 DDR-266 (4x512 MB)
	<b>Optical Drive</b>	DVD-ROM drive
	<b>Hard Drive</b>	36 GB Ultra320 SCSI 10K rpm
	<b>Graphics</b>	ATI RADEON 7000
	<b>Mouse</b>	HP scroll mouse
	<b>OS</b>	HP-UX 11i TCOE

<b>zx6000/2x900/2/36/ R7/L</b> A9374DF#ABA	<b>Processor</b>	Dual Intel Itanium 2 processors. 900 MHz
	<b>Cache Memory</b>	1.5MB L3
	<b>Memory</b>	2 GB ECC PC2100 DDR-266 (4x512 MB)
	<b>Optical Drive</b>	DVD-ROM drive
	<b>Hard Drive</b>	36 GB Ultra320 SCSI 10K rpm
	<b>Graphics</b>	ATI RADEON 7000
	<b>Mouse</b>	HP scroll mouse
	<b>OS</b>	Red Hat Linux Advanced Workstation 2.1

<b>zx6000/2x900/2/36/ Q4980/L</b> A9375DF#ABA	<b>Processor</b>	Intel Itanium 2 processor 900 MHz
	<b>Cache Memory</b>	1.5 MB L3
	<b>Memory</b>	2GB ECC PC2100 DDR-266 (4x512 MB)
	<b>Optical Drive</b>	DVD-ROM drive
	<b>Hard Drive</b>	36 GB Ultra320 SCSI 10K rpm
	<b>Graphics</b>	NVIDIA Quadro4 980 XGL
	<b>Mouse</b>	HP scroll mouse
	<b>OS</b>	Red Hat Linux Advanced Workstation 2.1

<b>zx6000 LEK/FldRk/ 2x900/1G/36G/ DVD/Q2EX</b> A9680AF#ABA	<b>Processor</b>	Intel Itanium 2 processor 900 MHz
	<b>Cache Memory</b>	1.5 MB L3
	<b>Memory</b>	1GB ECC PC2100 DDR-266 (2x512MB)
	<b>Optical Drive</b>	DVD-ROM drive
	<b>Hard Drive</b>	36 GB Ultra320 SCSI 10K rpm
	<b>Graphics</b>	NVIDIA Quadro2 EX
	<b>Mouse</b>	HP scroll mouse
	<b>OS</b>	Linux Enabled Kit

### Standard Features Pre-Configured Regional Models

**zx6000 LEK/FdRk/  
2x1.3/1G/36G/  
DVD/Q2EX  
A9680BF#ABA**

<b>Processor</b>	Intel Itanium 2 processor 1.3 GHz
<b>Cache Memory</b>	3 MB L3
<b>Memory</b>	1GB ECC PC2100 DDR-266 (2x512MB)
<b>Optical Drive</b>	DVD-ROM drive
<b>Hard Drive</b>	36 GB Ultra320 SCSI 10K rpm
<b>Graphics</b>	NVIDIA Quadro2 EX
<b>Mouse</b>	HP scroll mouse
<b>OS</b>	Linux Enabled Kit

### Configure to order options (custom configurations)

When buying a basic system, you have many configuration options. Base System includes one processor, no RAM, no disk, Ultra320 SCSI, external SCSI connector, 10/100/1000BT LAN, 10/100BT LAN, 2 serial, 4 USB, 1 AGP-4X slot, 3 PCI-X slots, and all required power cords.

		HP-UX	Linux
<b>HP workstation zx6000 base system</b>	HP Workstation zx6000, Intel Itanium 2 processor, 1.3GHz 3.0MB cache	X	X
	HP Workstation zx6000, Intel Itanium 2 processor, 1.5GHz 6.0MB cache	X	X
<b>Second Processor</b>	1.3GHz Intel Itanium 2 processor with 3.0MB integrated cache	X	X
	1.5GHz Intel Itanium 2 processor with 6.0MB integrated cache	X	X
<b>Operating System</b>	HP-UX 11i v2	X	
	Red Hat Linux Advanced Workstation 2.1		X
<b>Graphics Card</b>	ATI RADEON 7000 (32 MB, dual display, AGP)	X	X
	ATI FireGL Z1-128p (128MB, dual display, AGP 8X)	X	X
	NVIDIA Quadro4 980 XGL (128 MB, dual display, AGP 8X)		X
	ATI FireGL X1-256p (256 MB, dual display, AGP 8X)	X	X
	<b>NOTE:</b> ATI FireGL graphics cards occupy 2 physical slots in the system.		
<b>Memory</b>	512 MB PC2100 DDR SDRAM memory kit (2x256MB DIMMs)	X	X
	1 GB PC2100 DDR SDRAM memory kit (2x512MB DIMMs)	X	X
	2 GB PC2100 DDR SDRAM memory kit (2x1GB DIMMs)	X	X
	4 GB PC2100 DDR SDRAM memory kit (2x2GB DIMMs)	X	X
<b>Monitors</b>	HP p1230 22-inch (20.0-inch vis) Performance Natural-flat CRT Monitor	X	X
	HP L1925 19-inch TFT Flat Panel Display – Analog/Digital	X	X
	HP L2035 20-inch TFT Flat Panel Display	Analog mode only	X
	HP L2335 23-inch TFT Widescreen Flat Panel Display	1600x1200 or lower resolution only	X
<b>Internal hard disks</b> (minimum 1, maximum 3)	<b>Ultra320 SCSI Drives</b>		
	36 GB Ultra320 SCSI 10,000 rpm (hot plug)	X	X
	36 GB Ultra320 SCSI 15,000 rpm (hot plug)	X	X
	73 GB Ultra320 SCSI 15,000 rpm (hot plug)	X	X
	146 GB Ultra320 SCSI 10,000 rpm (hot plug)	X	X
<b>Storage Controllers</b>	Ultra160 SCSI Adapter for HP-UX, 1 channel	X	
	Ultra160 SCSI Adapter for HP-UX, 2-channel	X	
	Fibre Channel Adapter for Linux - (no boot)		X
	Fibre Channel Adapter, 2GB, for HP-UX	X	
	FWD SCSI Adapter, 2-channel (no boot)	X	
	Ultra160 SCSI Adapter for Linux, 1-channel		X
	Ultra160 SCSI Adapter for Linux, 2-channel		X



### Configure to order options (custom configurations)

<b>Optical Drive</b>	4.7GB DVD+RW, 4X Max, Slimline Drive		X
	DVD-ROM Drive, 8X Max, Slimline, Carbon	X	X
	CD-RW/DVD-ROM Combo Drive, 12X/8X Max, Slimline, Carbon	X	X
<b>Input Devices</b>	HP USB Keyboard Kit, includes USB scroll mouse	X	X
	HP USB Keyboard Kit, includes USB 3-button mouse	X	X
	HP USB scroll mouse	X	X
	SpaceBall 5000, Serial Interface	X	X
	USB to PS/2 Adapter	X	X
<b>Network Adapters</b>	1000BaseTX PCI LAN Adapter for HP-UX (Required for HP-UX)	X	
	1000BaseSX (Fibre) PCI LAN Adapter for HP-UX	X	
	100BaseT PCI LAN Adapter for HP-UX (Does not support boot.)	X	
	100BaseT PCI LAN Adapter, Quad Port	X	
	HyperFabric2 PCI Fiber Adapter for HP-UX	X	
	1000BaseTX PCI LAN Adapter for Linux		X
	1000BaseSX (Fibre) PCI LAN Adapter for Linux		X
	LAN, MUX, 8-port (1.3 and 1.5GHz models only)	X	
I/O and Networking Documentation kit	X	X	
<b>Management Processor Card</b>	HP Management Processor Card	X	X
<b>Redundant Power Supply</b>	Redundant Hotswap Power Supply	X	X
<b>Rack and Tower Options</b> (must order 1)	Workstation Field Rack Kit	X	X
	Workstation Factory Rack Kit	X	X
	Workstation Tower Kit	X	X

### After market options/Standalone accessories

		HP-UX	Linux	
<b>Second Processor</b> (must be same frequency as primary processor)	Intel Itanium 2, 1.3 GHz, 3.0 MB integrated cache	X	X	A9666A
	Intel Itanium 2, 1.5 GHz, 6.0 MB integrated cache	X	X	A9667A
<b>Processor Upgrades</b>	Upgrade kit: Intel Itanium 2, 1.3 GHz, 3.0 MB integrated cache	X	X	A9666A
	Upgrade kit: Intel Itanium 2, 1.5 GHz, 6.0 MB integrated cache	X	X	A9666A
	Return credit for Intel Itanium 2, 1 GHz, 3.0 MB integrated cache	X	X	A7848AN
<b>Operating System</b>	HP-UX 11i MTOE, License-to-use	X		B6867AA
	HP-UX 11i TCOE, License-to-use	X		B6868AA
	HP-UX 11i MTOE media kit	X		B9000AA
	HP-UX 11i TCOE media kit	X		B9001AA
	Linux Enablement Kit for HP Itanium-based workstation		X	T1502AA
	Red Hat Linux Advanced WS for zx6000		X	T2381AA
	Red Hat Linux Adv. WS for zx (0D1 only)		X	T2379AA
	HP Linux Installation Kit			T2170A
Red Hat Linux Advanced Workstation for zx6000 License-to-use		X	T2381AA	
<b>Memory</b>	512MB PC2100 DDR SDRAM memory kit (2x256MB DIMMs)	X	X	A7840A
	1GB PC2100 DDR SDRAM memory kit (2x512MB DIMMs)	X	X	A7841A
	2GB PC2100 DDR SDRAM memory kit (2x1GB DIMMs)	X	X	A7842A
	4GB PC2100 DDR SDRAM memory kit (2x2GB DIMMs)	X	X	A7843A
<b>Monitors</b>	HP p1230 22-inch (20.0-inch vis) Performance Natural-flat CRT Monitor	X	X	P9613#ABA
	HP L1925 19-inch TFT Flat Panel Display – Analog/Digital	X	X	P9626A#ABA
	HP L2035 20-inch TFT Flat Panel Display	Analog mode only	X	P9614A#ABA
	HP L2335 23-inch TFT Widescreen Flat Panel Display	1600x1200 or lower resolution only	X	P9615A#ABA
<b>Graphics</b>	ATI RADEON 7000 (32 MB, dual display, AGP)	X	X	A8049B
	ATI FireGL Z1-128p (128MB, dual display, AGP 8X)	X	X	A9654A
	NVIDIA Quadro4 980 XGL (128 MB, dual display, AGP 8X)		X	A9655A
	ATI FireGL X1-256p* (256 MB, dual display, AGP 8X)	X	X	A9653A
	<b>NOTE:</b> ATI FireGL graphics cards occupy 2 physical slots in the system.			

### After market options/Standalone accessories

<b>Hard Drives</b>	<b>Ultra320 SCSI Drives</b>			
	36 GB Ultra320 SCSI, 10,000 rpm, hot plug	X	X	A7835B
	36 GB Ultra320 SCSI, 15,000 rpm, hot plug	X	X	A7836A
	73 GB Ultra320 SCSI, 15,000 rpm, hot plug	X	X	A7838A
	146 GB Ultra320 SCSI, 10,000 rpm, hot plug	X	X	A7839A
<b>Storage Controllers</b>	Ultra160 SCSI Adapter for HP-UX, 1-channel	X		A6828A
	Ultra160 SCSI Adapter for HP-UX, 2-channel	X		A6829A
	Fibre Channel Adapter, for Linux - No Boot for 1.3GHz and 1.5GHz models only		X	AB234A
	Fibre Channel Adapter, 2GB, for HP-UX	X		A6795A
	FWD SCSI adapter, 2-channel (does not support boot)	X		A5159A
	Ultra160 SCSI Adapter for Linux, 1-channel		X	A7059A
	Ultra160 SCSI Adapter for Linux, 2-channel		X	A7060A
<b>Optical Drives</b>	4.7GB DVD+RW, 4X Max, Slimline Drive		X	AB616A
	DVD-ROM Drive, 8X Max, Slimline, Carbon	X	X	A7850A
	CD-RW/DVD-ROM Combo Drive, 12X/8X Max, Slimline, Carbon	X	X	A7851A
<b>Network Adapters</b>	1000BaseTX PCI LAN Adapter for HP-UX	X		A6825A
	1000BaseSX (Fibre) PCI LAN Adapter for HP-UX	X		A6847A
	100BaseT PCI LAN Adapter for HP-UX	X		B5509BA
	100BaseT PCI LAN Adapter, Quad Port	X		A5506B
	HyperFabric2 PCI Fiber Adapter for HP-UX	X		A6386A
	1000BaseTX PCI LAN Adapter for Linux		X	A7061A
	1000BaseSX (Fibre) PCI LAN Adapter for Linux		X	A7073A
	LAN, MUX, 8-port (1.3 and 1.5GHz models only)	X		A6748A
	I/O and Networking Documentation kit	X	X	A520
<b>Input Devices</b>	Keyboard Kit, USB, PC-104/105, Carbon black; includes USB keyboard and USB Scroll Mouse.	X	X	A7861C
	USB to PS/2 adapter (allows the use of a PS/2 keyboard and mouse, or KVM switch)	X	X	A7782A
	SpaceBall 5000, Serial Interface	X	X	AB602A
<b>Audio</b>	Adaptor, PCI-1xU, Audio, FM801	X	X	A7784A
<b>Management Processor Card</b>	HP Management Processor Card	X	X	A6875A
<b>Redundant Power Supply</b>	Redundant Hotswap Power Supply	X	X	A6874A
<b>Rack and Tower Kits</b>	Rack to Tower Conversion Kit	X	X	A8718A
	Tower to Rack Conversion Kit	X	X	A8082A

### Memory

#### ECC PC2100 DDR-266 memory

Memory must be installed in pairs of the same size. Memory upgrade kits come in pairs. This chart does not represent all possible memory configurations.

#### Minimum Memory

512-MB (2x256-MB)

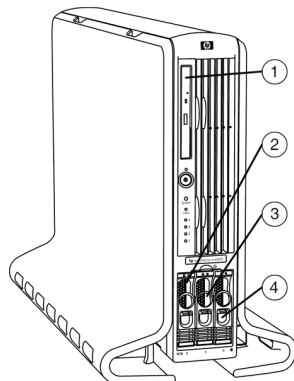
#### Maximum Memory

24-GB (12x2-GB)

Memory		Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	Slot 6
Minimum	512 MB	256 MB	256 MB				
Maximum	24 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
Memory		Slot 7	Slot 8	Slot 9	Slot 10	Slot 11	Slot 12
Minimum	512 MB						
Maximum	24 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB

### Storage

#### Drive Bay Locations



### Drive Support

	Quantity Supported	Position Supported	Controller
<b>Optical Drives</b>			
Slimline DVD+RW Drive	Up to 1	1	Integrated EIDE
Slimline DVD-ROM Drive	Up to 1	1	Integrated EIDE
Slimline DVD-ROM/CD-RW Combo Drive	Up to 1	1	Integrated EIDE

#### Hard Drives

##### Ultra320 SCSI Drives

1-inch	Quantity Supported	Position Supported	Controller
Up to 3	Up to 3	2, 3, 4	Optional Ultra160 SCSI Controller or Fibre Channel Adapter for Linux - no boot
36 GB Ultra320 SCSI (10K rpm)			
73 GB Ultra320 SCSI (15K rpm)			
146 GB Ultra320 SCSI (10K rpm)			

<b>Maximum Storage Capacity</b>	438 GB (SCSI)
---------------------------------	---------------

### Technical Specifications

<b>System Unit</b>	<b>Tower Dimensions</b> (HxWxD)	19.5 x 11.7 x 26.5 in (49.5 x 29.7 x 67.3 cm)	
	<b>Weight</b> (tower configuration)	Minimum Tower Configuration	49.4 lb (22.4 kg)
		Maximum Tower Configuration	56.3 lb (25.5 kg)
	<b>Rack Dimensions</b> (HxWxD)	3.4 x 19.0 x 26.8 in (8.6 x 48.3 x 68.1 cm)	
	<b>EIA Units</b>	2U (20 units possible per 2 meter rack)	
	<b>Weight</b> (rack configuration)	Minimum Rack Configuration	38.6 lb (17.5 kg)
		Maximum Rack Configuration	49.0 lb (22.2 kg)
	<b>Power Supply</b>	Input current (autoranging)	8.0A max @ 100-127V, 3.9A max @ 200-240V
		Line Frequency	50- 60 Hz
		Maximum Power Input	714 W
	<b>Temperature</b>	Operating	41° to 95° F (5° to 35° C)
		Non-operating	-40° to 158° F (-40° to 70° C)
	<b>Humidity</b> (non-condensing)	Operating	15% to 80% relative
<b>Maximum Altitude</b> (non-pressurized)		Operating	10,000 ft (3,048 m)
	Non-operating	15,000 ft (4572 m)	
<b>HP Keyboard</b>	<b>Dimensions</b> (HxWxD)	18.82 x 7.3 x 1.85 in (47.8 x 18.6 x 4.7 cm)	
	<b>Weight</b>	Approx.1.2 kg ± 0.1 kg	
	<b>Electrical</b>	Operating Voltage	+ 5VDC ± 5%
		Power Consumption	60 mA maximum (with 3 LEDs on)
		System Interface	USB connector
		ESD	CE level 4, 15 kV air discharge
		EMI-RFI	Conforms to FCC rules for a Class B computing device
		PC98	Functionally compliant
		<b>Mechanical</b>	Languages
	Keycaps		Standard 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		2.9 m
	PC98-99		Mechanically compliant
	<b>Environmental</b>	Acoustics	65 dBA for spacebar, 55 dBA for all others maximum sound pressure level
		Operating Temperature	41° to 95° F (5° to 35° C)
		Non-operating Temperature	-40° to 140° F (-40° to 60° C)
		Operating Humidity	10% to 80% (non condensing at ambient)
		Non-operating Humidity	10% to 90% (non condensing at ambient)
		Operating Shock	40 g, 6 surfaces
		Non-operating Shock	80 g, 6 surfaces
Operating Vibration		2 g peak acceleration	
Non-operating Vibration	4 g peak acceleration		

### Technical Specifications

<b>SpaceBall 5000</b>	<b>Dimensions (HxWxD)</b>	3.0 x 6.0 x 8.4 in (7.6 x 15.2 x 21.3 cm)	
	<b>Ball Diameter</b>	2.2 in (5.6 cm)	
	<b>Weight</b>	2.1 lb (9.94 kg)	
	<b>Features</b>	Six degrees of freedom motion control through the X, Y, Z axis (pitch, roll, yaw)	
		Device sensitivity adjustable to preference	
		Certified for leading CAD and DCC applications	
	<b>Environmental</b>	Operating Temperature	50° to 104° F (10° to 40° C)
		Non-operating Temperature	43° to 140° F (6° to 60° C)
		Operating Humidity	8% to 80% (non-condensing at ambient)
		Non-operating Humidity	5% to 80% (non-condensing at ambient)
	<b>Mechanical</b>	Buttons	12 programmable (unshifted)
			23 programmable (shifted)
		Ball Force range	0.5 - 8.2N (1.8 - 29.5 oz)
	Ball Torque range	0.085 - 0.33 oz-in. (6.91 Nmm)	
	Resolution	10 bits	
<b>Serial Specifications</b>	Connector	9-pin D-subminiature receptacle (DB9S)	
	Cable Length	12.8 ft. (3.9 m)	
	Data rate	9600 bps	
	Flow control	Xon/Xoff	
<b>System Requirements</b>	10 Megabytes free disk space for driver and plug-in installation		
	CD-ROM device required		
<b>Software Drivers</b>	Unix drivers for HP-UX		
	Red Hat Linux		
<b>Regulatory Approvals</b>	Compliant	UL, cUL, EN 950, EN 60950, CSA, FCC, CE Mark, TUV, CISPR 22, EN 50082, IEC 1000 4-2, IEC 1000-4-3, AS/NZS, VCCI, BSMI, C-Tick, PCI, MIC	

<b>HP 3-Button Mouse</b>	<b>Dimensions/Weight</b>	Height	1.42 in (3.6 cm)
		Length	4.17 in (10.7 cm)
		Width	2.87 in (7.4 cm)
		Weight	5.20 oz (150 g)
	<b>Environmental</b>	Operating Temperature	32° to 104° F (0° to 40° C)
		Non-operating Temperature	-4° to 140° F (-20° to 60° C)
		Operating Humidity	10% to 90% (non condensing at ambient)
	<b>Mechanical</b>	Resolution	400 ± 20% DPI
		Tracking Speed	10 in/s Maximum
		Switch Life	1,000,000 operations (using Hasco modified tester)
		Switch Type	Micro-switches
		Tracking Mechanism Life	155 miles (250 km) at average speed of 10 in/s
		Cable Length	6 ft (1.8 m)
PC98-99		Mechanically compliant	
<b>Regulatory Approvals</b>	Compliant	UL, CSA, FCC, CE Mark, TUV, TUV GS, VCCI, BSMI, C-Tick	

### Technical Specifications

<b>HP 2-button Scroll Mouse</b>	<b>Scroll Wheel</b>	8 mm		
	<b>Maximum Rotation Speed</b>	30 mm/s		
	<b>Switch Type</b>	Light force micro-switch		
	<b>Switch Life</b>	1 million operations		
	<b>Mechanical Life</b>	Minimum 200,000 revolutions		
	<b>Environmental</b>	<b>Operating Temperature</b>	50° to 122° F (10° to 50° C)	
		<b>Non-operating Temperature</b>	-22° to 140° F (-30° to 60° C)	
		<b>Operating Humidity</b>	10% to 90% (non condensing at ambient)	
		<b>Non-operating Humidity</b>	20% to 80% (non condensing at ambient)	
		<b>Operating Shock</b>	40 g, 6 surfaces	
		<b>Non-operating Shock</b>	80 g, 6 surfaces	
		<b>Operating Vibration</b>	2 g peak acceleration	
		<b>Non-operating Vibration</b>	4 g peak acceleration	
		<b>Electrical</b>	<b>Operating Voltage</b>	+ 5VDC ± 10%
			<b>Power Consumption</b>	15mA
			<b>System Consumption</b>	USB connector
			<b>ESD</b>	CE level 4, 15 kV air discharge
	<b>EMI-RFI</b>		Conforms to FCC rules for a Class B computing device	
	<b>PC98</b>		Functionally compliant	
	<b>Mechanical</b>	<b>Resolution</b>	400 ± 20% DPI	
		<b>Tracking Speed</b>	10 in/s Maximum	
		<b>Acceleration</b>	100 in/s	
		<b>Switch Actuation</b>	85 g nominal peak force	
		<b>Switch Life</b>	1,000,000 operations (using Hasco modified tester)	
		<b>Cable Length</b>	2 m	
		<b>PC98-99</b>	Mechanically compliant	
		<b>Regulatory Approvals</b>	UL, CSA, FCC, CE Mark, TUV, TUV GS, VCCI, BCIQ, C -Tick	

<b>LSI Logic Ultra320 SCSI Dual Channel host adapter</b>	<b>Bus architecture</b>	PCI-X (backward compatible to PCI)
	<b>Number of supported devices</b>	30
	<b>Interface protocol</b>	64-bit PCI-X bus-master
	<b>Host bus transfer rate</b>	Up to 133 MB/s
	<b>SCSI data transfer rate</b>	Up to 640 MB/s
	<b>Bus width</b>	64-bit (fits both 32-bit and 64-bit bus widths)
	<b>Internal SCSI connectors</b>	Two 68-pin HD
	<b>External SCSI connector</b>	Two 68-pin VHDCI
	<b>Total connectors</b>	4
	<b>Plug and Play Support</b>	Yes
	<b>Dimensions (H x L)</b>	6.7 x 4.2 in (17.3 x 11.4 cm)
	<b>Approvals/ environmental</b>	CE, VCCI, Canada, C-Tick, FCC class B, UL 94VO, BSMI, MIC
	<b>Operating system support</b>	Red Hat Enterprise Linux Workstation 3.0



### Technical Specifications

#### Ultra320 SCSI Hard Drives 146 GB, 10K rpm

<b>Nominal Capacity</b>	146.8 GB
<b>Dimensions (HxWxD)</b>	1.00 x 4.00 x 5.75 in (2.54 x 10.16 x 14.61 cm)
<b>Interface</b>	Ultra320 SCSI
<b>Transfer rate synchronous (maximum)</b>	320 MB/s
<b>Seek time (typical reads, including settling)</b>	Single track: 0.35 ms Average: 4.7 ms Full-stroke: 10.0 ms
<b>Average rotational latency</b>	2.99 ms
<b>Rotational speed</b>	10,000 rpm
<b>Logical blocks</b>	289,749,488
<b>Operating temperature</b>	41° to 131° F (5° to 55° C)

#### 73 GB, 15K rpm

<b>Nominal Capacity</b>	73.4 GB
<b>Dimensions (HxWxD)</b>	1.00 x 4.00 x 5.75 in (2.54 x 10.16 x 14.61 cm)
<b>Interface</b>	Ultra320 SCSI
<b>Transfer rate synchronous (maximum)</b>	320 MB/s
<b>Seek time (typical reads, including settling)</b>	Single track: 0.35 ms Average: 4.7 ms Full-stroke: 10.0 ms
<b>Average rotational latency</b>	2.99 ms
<b>Rotational speed</b>	10,000 rpm
<b>Logical blocks</b>	289,749,488
<b>Operating temperature</b>	41° to 131° F (5° to 55° C)

#### 36 GB, 15K rpm

<b>Nominal Capacity</b>	36.4 GB
<b>Dimensions (HxWxD)</b>	1.00 x 4.00 x 5.75 in (2.54 x 10.16 x 14.61 cm)
<b>Interface</b>	Ultra320 SCSI
<b>Transfer rate synchronous (maximum)</b>	320 MB/s
<b>Seek time (typical reads, including settling)</b>	Single track: 35 ms Average: 4.7 ms Full-stroke: 10.0 ms
<b>Average rotational latency</b>	2.99 ms
<b>Rotational speed</b>	15,000 rpm
<b>Logical blocks</b>	71,132,960
<b>Operating temperature</b>	41° to 131° F (5° to 55° C)

### Technical Specifications

<b>36 GB, 10K</b>	<b>Nominal Capacity</b>	36.4 GB
	<b>Dimensions (HxWxD)</b>	1.00 x 4.00 x 5.75 in (2.54 x 10.16 x 14.61 cm)
	<b>Interface</b>	Ultra320 SCSI
	<b>Transfer rate synchronous (maximum)</b>	320 MB/s
	<b>Seek time (typical reads, including settling)</b>	Single track: 35 ms Average: 4.7 ms Full-stroke: 10.0 ms
	<b>Average rotational latency</b>	2.99 ms
	<b>Rotational speed</b>	10,000 rpm
	<b>Logical blocks</b>	71,132,960
	<b>Operating temperature</b>	41° to 131° F (5° to 55° C)

<b>HP 4.7GB DVD+RW Slimline Drive</b>	<b>Capacity</b>	4.7 GB DVD disc/700 MB CD disc	
	<b>Dimensions (HxWxD)</b>	0.5 x 5.22 x 5.46 in (1.35 x 13.28 x 13.88 cm)	
	<b>Weight</b>	0.551 lb (250 g)	
	<b>Interface</b>	ATAPI/EIDE	
	<b>Mounting Orientation</b>	Horizontal or vertical (within 15 degrees)	
	<b>Data Transfer Rates - Read</b>	<b>Digital audio extraction (minimum)</b>	1,200 KB/s (8X)
		<b>CD read</b>	Up to 3,600 KB/s (24X)
		<b>DVD read</b>	Up to 8,100 KB/s (8X)
	<b>Media and Formats - Read</b>	<b>CD formats</b>	CD-DA (Red Book), CD-ROM (Modes 1 and 2 - Yellow Book), CD-ROM XA (Mode 2, Forms 1 and 2), CD-I (FMV), Photo CD (single and multi-session), Video CD, CD-Text, CD Extra
		<b>CD media</b>	Stamped, CD-R, CD-RW
		<b>DVD formats</b>	DVD-ROM, DVD-Video (with application support)
		<b>DVD media</b>	Stamped (single or dual layer, single sided), DVD+RW, DVD+R
	<b>Data Transfer Rates - Write</b>	<b>DVD+R write</b>	5.54 MB/s (4X)
		<b>DVD+RW write or rewrite</b>	3.32 MB/s (2.4X)
		<b>CD-R write</b>	1200 KB/s (8X)
		<b>CD-R write</b>	1800 KB/s (12X)
		<b>CD-R write</b>	2,400 KB/s (10X)
		<b>CD-RW write</b>	600 KB/s (4X)
		<b>CD-RW write</b>	1500 KB/s (10X)
	<b>Media and Formats - Write</b>	<b>CD formats</b>	CD-DA (Red Book), CD-ROM (Modes 1 and 2 - Yellow Book), CD-ROM XA (Mode 2, Forms 1 and 2), CD-I (FMV), Photo CD (single and multi-session), Video CD, CD-Text, CD Extra
		<b>CD media</b>	CD-R, CD-RW
		<b>DVD formats</b>	DVD-ROM, DVD-Video (with application support)
		<b>DVD media</b>	DVD+RW, DVD+R

### Technical Specifications

<b>Write Methods</b>	Disc-at-once, track-at-once, incremental fixed and variable packet, random access write (DVD+RW only), sequential write (DVD +R, +RW). Writing method is application dependant.	
<b>Data Transfer Mode</b>	ATA PIO mode 4-16.6-Mbps, ATA UltraDMA mode 2-33-Mbps (default)	
<b>Access Times</b> (typical)	<b>DVD-ROM Single Layer Random</b>	150 ms typical
	<b>CD-ROM Random</b>	140 ms typical
	<b>CD-ROM Full stroke</b>	200 ms typical
<b>Start-up Time</b> (typical)	<b>DVD-ROM</b>	9.5 s typical (time from disk insertion to drive ready)
	<b>CD-ROM</b>	8.0 s typical (time from disk insertion to drive ready)
<b>Stop Time</b> (typical)	< 9 s	
<b>Write Buffer Size</b>	2 MB (minimum)	
<b>Audio Output</b>	<b>16 bit data output</b>	Through ATA interface
	<b>Volume Control</b>	Software controlled
<b>Operating Conditions</b>	<b>Temperature</b> (Read)	41° to 122° F (5° to 50° C)
	<b>Humidity</b> (Write)	41° to 113° F (5° to 45° C)
<b>Approvals/ Environmental</b>	UL 1950 (US and Canada), CE, FDA, FCC (B), TUV, C-TICK (B)	
<b>Operating Systems Supported</b>	Red Hat LINUX Advanced Workstation version 2.1	
<b>Supplied Software</b>	Ahead Nero Enterprise Edition, including the Nero5 Express basic user interface and the Nero5 Burning ROM advanced user interface.	

#### Slimline CD-RW/ DVD-ROM Combo Drive

<b>Drive</b>	Manual tray-load	
<b>Orientation</b>	Horizontal or vertical	
<b>Interface Type</b>	ATAPI	
<b>Dimensions</b> (W x H x D)	5.23 x 0.5 x 5.46 in (13.28 x 1.27 x 13.87 cm)	
<b>Disc Diametre</b>	12 cm, 8 cm	
<b>Disc Thickness</b>	1.2 mm	
<b>Track Pitch</b>	1.6 µm (CD-ROM); 0.74 m m (DVD-ROM)	
<b>Disc Centre Hole Diametre</b>	15 mm	
<b>Reference Scanning Velocity</b>	1.2 m/s (CD); 3.49 m/s (DVD SL); 3.84 m/s (DVD DL)	
<b>Read Only Disc Parametres</b>	<b>Formats and Modes Supported</b>	CD-ROM—Mode 1; CD-ROM XA—Mode 2 (forms 1 and 2); CD digital audio; CD Extra; CD-I—Mode 2 (forms 1 and 2) and CD-I-Ready; Photo CD (single and multi-session); video CD; DVD (single and doublelayer); DVD-R 3.95 GB; DVD-R 4.7 GB; DVD-RW 4.7 GB; DVD+ RW 4.7 GB
	<b>Capacity</b>	550 MB (Mode 1, 12 cm); 650 MB (Mode 1, 12 cm); 630 MB (Mode 2, 12 cm); 740 MB (Mode 2, 12 cm); 700 MB (CD-ROM 80 min); 180 MB (CD-ROM 8 cm) 4.7 GB (DVD-5); 8.54 GB (DVD-9); 9.4 GB (DVD-10)
	<b>Block Size</b>	Mode 1—2,048 and 2,352 bytes; mode 2, form 1—2,048; 2,328; 2,336; 2,340 and 2,352 bytes; mode 2, form 2—2,328; 2,336; 2,340 and 2,352 bytes; CD-DA—2,352 and 2,368 bytes; DVD—2,048 bytes
<b>Writeable Disc Parametres</b>	<b>Disc Type</b>	CD-R and CD-RW
	<b>Write Methods</b>	Disc at Once, Track at Once, Session at Once, Variable Packet, Fixed Packet
	<b>Format and Modes</b>	CD-ROM (mode 1); CD-ROM XA (mode 2, forms 1 and

### Technical Specifications

	<b>Supported</b>	2); CD digital audio, CD-I (mode 2, forms 1 and 2); video CD
	<b>Capacity</b>	550 MB (Mode 1, 12 cm); 650 MB (Mode 1, 12 cm); 630 MB (Mode 2, 12 cm); 740 MB (Mode 2, 12 cm); 700 MB (CD-ROM 80 min); 180 MB (8 cm)
	<b>Block Size</b>	Mode 1—2,048 bytes; mode 2, form 1—2,048 and 2,352 bytes; mode 2, form 2—2,352 bytes; CD-DA—2,353 bytes
<b>Access Times</b> (typical)	<b>Random DVD</b>	< 130 ms
	<b>Random CD</b>	< 110 ms
	<b>Full Stroke DVD</b>	< 225 ms
	<b>Full Stroke CD</b>	< 210 ms
<b>Data Transfer Rates</b>	<b>Maximum — CD-R Write</b>	3600 KB/s (24X CAV)
	<b>Sustained — CD-RW Write</b>	1500 KB/s (10X CLV)
	<b>Minimum — CD-R Read</b>	3600 KB/s (24X ZCLV)
	<b>Minimum — CD-ROM Read</b>	3600 KB/s (24X CAV)
	<b>Minimum — DVD-ROM Read</b>	10800 KB/s (8X CAV)
	<b>Minimum — Digital Audio Extraction</b>	1200 KB/s (8X CLV)
<b>Data Transfer Modes</b>	ATA PIO mode 4 (16.7 MB/s); ATA Multi-word DMA mode 2 (16.7 MB/s)	
<b>Bus Rate</b>	16.6 MB/s (burst) with DMA support	
<b>Cache Buffer</b>	2 MB (minimum)	
<b>Startup Time</b> (single)	< 9 seconds (typical)	
<b>Startup Time</b> (multi-session)	< 30 seconds (typical)	
<b>Stop Time</b>	< 6 seconds	
<b>Power</b>	<b>Source</b>	Four-pin, DC power receptacle
	<b>DC Power Requirement</b>	5 VDC $\pm$ 5%—100 mV ripple p-p
	<b>DC Current</b>	< 800 mA read (typical at Outer Diameter)
		< 900 mA write (typical at Outer Diameter)
		< 1600 mA (maximum excluding spike current < 1 ms duration)
< 1600 mA (maximum excluding spike current < 1 ms duration)		
<b>Total Drive Power</b> (standby mode)	< 70 mW	
<b>Audio Output Level</b>	0.7 – 0.9 Vrms	
<b>Configuration Jumper Block</b>	Cable select mode	
<b>Data Interface Connector</b>	68-pin interface connector	
<b>Environmental</b> (all conditions non-condensing)	<b>Temperature</b> (operating)	41° to 122° F (5° to 50° C)
	<b>Relative Humidity</b> (operating)	10% to 80%
	<b>Maximum Wet Bulb Temperature</b> (operating)	84° F (29° C)
<b>Certifications, Requirements</b>	Multi-read requirements, ACA AS/NZS 3548, ANSI C63.4–1992 CB Test Certificate for IEC 60950, CFR 47 part 15, CSA C22.2 No. 60950, DHSS/FDA - 1040, EN55022, EN55024, EN60 950:2000, IEC 68, 908, 61000-4, ISO 9660, 10149, 13346, TUV or VDE EN60 950, UL 60950, ICES-003 class B, CE Mark	

### Technical Specifications

<b>Slimline DVD-ROM Drive</b>	<b>Capacity</b>	4.7 GB DVD disc/700 MB CD disc	
	<b>Drive</b>	Manual tray-load	
	<b>Orientation</b>	Horizontal or vertical	
	<b>Dimensions</b> (W x H x D)	5.23 x 0.5 x 5.46 in (13.28 x 1.27 x 13.88 cm)	
	<b>Weight</b>	280g	
	<b>Interface</b>	ATAPI/EIDE	
	<b>Mounting Orientation</b>	Horizontal (80 or 120 mm discs) or vertical (120 mm discs only)	
	<b>Form Factor</b>	12.7 mm Slim Line	
	<b>Centre Hole Diameter</b>	15 mm	
	<b>Disc Diameter</b>	120 mm and 80 mm	
	<b>Disc Thickness</b>	1.2 mm	
	<b>Track Pitch</b>	1.60 µm (CD), 0.74 µm (DVD)	
	<b>Access Times</b> (typical reads, including settling)	<b>Random</b>	< 100 ms (CD), < 125 ms (DVD)
		<b>Full stroke</b>	< 175 ms (CD), < 225 ms (DVD)
	<b>Audio Output Level</b>	<b>Line out</b>	0.7 – 0.9 Vrms
	<b>Cache Buffer</b>	128 KB/s (minimum)	
	<b>Data Transfer Rate</b> (typical, including settling)	<b>Sustained 24XCD-ROM</b>	3.6 MB/s
		<b>Sustained 8X DVD</b>	10.08 MB/s
		<b>MultiWord DMA Mode 2</b>	16.6 MB/s
		<b>PIO Mode 4</b> (single burst)	16.6 MB/s
<b>Start-up Time</b>	< 15 seconds		
<b>Stop Time</b>	< 4 seconds		
<hr/>			
<b>PCI-Universal audio card</b>	<b>Audio processor</b>	Forte Media FM801-AU, with Stac 9721T & 9708T codecs, AC97 v2.1	
	<b>Connectors</b>	<b>External</b>	MIC in: 3.5mm phone LINE IN: 3.5mm phone (stereo) AUDIO OUT: 3.5mm phone (stereo)
		<b>Internal</b>	CD IN: Molex SL or 4-pinbb Supplied CD-ROM audio cable uses 4-pin connector AUX IN: 4-pin MODEM: 4-pin mono in/out
	<b>Configuration</b>	Jumper-less: all configuration either automatic or under host software control	
	<b>Dimensions</b>	12.2cm:bulkhead face to rear edge	
		Length: 5.4 in (13.4 cm)	
		Height: 4.78 in (12.0 cm) 10.0cm clearance required above PCI connector if SL connectors used	
		Thickness: 0.8 in (1.2 cm)	
	<b>Weight</b>	3.0 oz (85 g) card alone 1.5 lb (0.68 kg) in shipping carton	
	<b>Power</b>	3 watts max	
	<b>Temperature</b>	<b>Operating</b>	41° to 95° F (5° C to 35° C)
		<b>Non-operating</b>	-40° to 158° F (-40° C to 70° C)
	<b>Altitude</b>	<b>Operating</b>	3.0 km
		<b>Non-operating</b>	4.6 km
<b>Relative humidity</b>	15% to 80%, non-condensing		
<b>PCI specifications</b>	<b>Version</b>	PCI 2.1	
	<b>Signaling</b>	Voltage:3.3 or 5.0V (PCI Universal) rate:33 MHz	
	<b>Width</b>	32-bit	

### Technical Specifications

<b>Audio specifications</b>	<b>Interrupts</b>	Shareable, system-managed	
	<b>Channels</b>	1 or 2 (mono or stereo) (5.1 surround channels not supported)	
	<b>Line-in</b>	10 KW , 1.0V full-scale, linear, 20 Hz to 19,200 Hz, $\pm$ 1 dB	
	<b>CD-in</b>	47 KW, 1.0V full-scale, linear 20 Hz to 19,200 Hz, $\pm$ 1 dB	
	<b>Line-out</b>	10 KW, 1.0V full-scale 20 Hz to 19,200 Hz, $\pm$ 1 dB	
	<b>Phone-out</b>	5 KW , 60mW/channel, linear 65 Hz to 19,200 Hz, $\pm$ 1 dB	
	<b>Mic in</b>	10 kW , 100mV full-scale, curve 20 Hz to 19,200 Hz, $\pm$ 1 dB	
	<b>Distortion</b>	Line/CD In/Out: 0.02% THD Mic In/Phone Out: 0.05% THD	
	<b>Noise</b>	Line/CD In: > 75 dB Line Out: > 90dB	
	<b>Sampling rates</b>	8, 3x, 44.1 and 48 KHz, 1 or 2-channel	
	<b>Encodings</b>	CCITT A-law, CCITT $\mu$ -law	
	<b>Headphone specifications</b>	<b>Type</b>	open-air (on-ear), with adjustable band, 27mm Mylar drivers, anisotropic magnet
		<b>Weight</b>	71g (2.5 oz.)
	<b>Channels</b>	2 (stereo)	
	<b>Impedance</b>	32 $\Omega$	
	<b>Sensitivity</b>	94 dB SPL/1mW	
	<b>Power handling</b>	5 mW	
	<b>Response</b>	20-20,000 Hz	
	<b>Distortion</b>	3% THD	
	<b>Cord</b>	10 ft (3m), shielded, single-sided, straight (uncoiled)	
	<b>Connector</b>	3.5mm stereo phone plug	
<b>Kit contents</b>		PCI-Universal audio card Stereo headphones CD-ROM-to-card audio cable Signal-integrity clips	

### Technical Specifications

<b>100BaseT PCI LAN Adapter B5509BA</b>	<b>Dimensions (H x D)</b>	5.6 x 4.75 in (14.2 x 12.1 cm)
	<b>Ethernet Controller</b>	Digital 21143
	<b>Software Driver</b>	btlan5 or btlan (for HP-UX 11i)
	<b>Data Transfer Rate</b>	10 and 100mbps, half and full duplex
	<b>Max Bandwidth</b>	200mbps
	<b>PHY</b>	National DP83840
	<b>Device Support</b>	One
	<b>Bus Type</b>	2.1 PCI, 32-bit bus master, 33 MHz
	<b>Internal Connectors</b>	Single RJ-45 port. Support for Category 5 UTP cable
	<b>Access Method</b>	CSMA/CD, 10/100mbps, auto-negotiation
	<b>System Requirements</b>	Available PCI slot (2.1 compliant)
	<b>Environmental</b>	<b>Operating Temperature</b> 41° to 122° F (5° to 50° C) <b>Operating Humidity</b> 5% to 85% non-condensing <b>Operating Altitude</b> 10000 ft (3000 m) max
	<b>Power Requirements</b>	+5 volts @ 5 amp. max
	<b>Operating System Support</b>	HP-UX 10.20 or later
	<b>Other</b>	B5509BA: includes hardware, software (can be pre-installed with HP-UX operating system and hardware platform or can come with an application CD as stand-alone product), and the User's Guide

<b>100BaseT PCI LAN Adapter Quad Port A5506B</b>	<b>Dimensions (H x D)</b>	6.75 x 4.75 in (17.1 x 12.1 cm) to conform to PCI half length card specifications
	<b>Ethernet Controller</b>	Digital 21143
	<b>Software Driver</b>	btlan
	<b>Data Transfer Rate</b>	10 and 100mbps, half and full duplex
	<b>Max Bandwidth</b>	800mbps
	<b>PHY</b>	Level One LXT970ATC
	<b>Device Support</b>	Up to 4
	<b>Bus Type</b>	2.1 PCI, 64-bit bus master, 33 MHz
	<b>Internal Connectors</b>	Four RJ-45 ports. Support for Category 5 UTP.
	<b>External Connectors</b>	One 68-pin VHDCI
	<b>Access Method</b>	CSMA/CD, 10/100mbps, auto-negotiation
	<b>System Requirements</b>	Available PCI slot (2.1 compliant)
	<b>Environmental</b>	<b>Operating Temperature</b> 41° to 122° F (5° to 50° C) <b>Operating Humidity</b> 5% to 85% non-condensing <b>Operating Altitude</b> 10000 ft (3000 m) max
	<b>Power Requirements</b>	+5 volts @ 5 amp. max
	<b>Operating System Support</b>	HP-UX 10.20 HP-UX 11.00 HP-UX 11i HP-UX 11.22
	<b>Other</b>	A5506B: includes hardware and software (can be pre-installed with HP-UX operating system and hardware platform or come with an application CD as stand-alone product), and the User's Guide

### Technical Specifications

<b>1000BaseTX PCI LAN Adapter for HP-UX A6825A</b>	<b>Dimensions</b>	2.536 x 6.6 in (6.44 x 16.76 cm)
	<b>Connector</b>	RJ-45
	<b>Controller</b>	Digital 21143
	<b>O/S</b>	HP-UX 11.0 HP-UX 11i v1 HP-UX 11i v1.6
	<b>Data rates supported</b>	10/100/1000 Mbps
	<b>Compliance</b>	CE Mark EMC directive 89/336/EEC & 92/31/EEC & 93/68/EEC Low Voltage Directive 73/23/EEC and 93/68/EEC CISPR 22:1993 / EN 55022:1994 Class B radiated emissions EN 50082-1:1992 IEC 801-2:1991 / prEN 55024-2:1992 - 4kV CD, 8kV AD IEC 801-3:1984 / prEN 55024-3:1991, 3 V/m IEC 801-4:1998 / prEN 55024-4:1993, 0.5 kV Signal lines FCC Part 15, Class B GB 9254-1988
	<b>Bus architecture</b>	64-bit/66 MHz PCI
	<b>Data path width</b>	64-bit
	<b>Data transfer mode</b>	Bus-master DMA
	<b>Interrupts</b>	Interrupt-A, shareable, system-managed
	<b>Power requirement</b>	1.5A @ 5Vdc max. (7.5W)
	<b>Boot ROM support</b>	Yes
	<b>Network transfer rate</b>	33MHz, 133MBytes/sec. burst, zero-wait-state bus-mastered DMA 10BASE-T (full-duplex) 20 Mbps
	<b>Environmental</b>	<b>Operating Temperature</b> 32° to 131°F (0° to 55° C) <b>Operating Humidity</b> 85% at 131° F (55° C)
	<b>Management capabilities</b>	ACPI, WOL and DMI 2.0, PXE 2.0, WfM 2.0, Intel PROset II utility
	<b>Kit contents</b>	One PCI 10/100 LAN card, [DS1]



### Technical Specifications

<b>ATI Radeon 7000 Graphics Card</b>	<b>Form Factor</b>	ATX
	<b>Graphics Controller</b>	ATI Radeon 7000 GPU
	<b>Bus Type</b>	AGP 2x/4x Version 2.0 compliant
	<b>RAMDAC</b>	300MHz Dual DACs. 165MHz TMDS for Digital Display
	<b>Memory</b>	32MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage
	<b>Connectors</b>	DB-15 analog and DVI-I analog/digital monitor outputs.
	<b>Dimensions</b>	Single short form factor AGP/ATX card
	<b>Multi-monitor support</b>	Dual Independent Display (VGA+DVI or VGA+VGA with DVI-to-VGA converter)
	<b>Additional product features</b>	AGP 2x/4x Version 2.0 compliant. 32MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage VESA 3 (flash ROM) BIOS HydraVision Display Management Software Compliant with Microsoft/Intel PC2001 Workstation requirements Video Timings compliant with VESA DMT 1.0 and VESA GTF 1.0 specifications DDC1/2B/2B+ Monitor support on all OS platforms VESA Display Power Management support
	<b>ATI RADEON 7000 GPU featuring</b>	183 MHz engine clock rate 128-bit GPU engine 64-bit external frame buffer interface running at a clock rate of 183 MHz VGA controller Triangle Setup Engine Texture Cache Bilinear and Trilinear Texture filtering Line and Edge Anti-aliasing Specular Highlights Z-Buffering and Double Buffering High performance 2D rendering engine DVD playback with integrated motion compensation and iDCT
	<b>Supported graphics APIs</b>	OpenGL 1.2 and below DirectX 8.0 and below
	<b>Available graphics drivers</b>	HP-UX and Red Hat Linux Advanced Workstation 2.1 for Itanium. See <a href="http://www.hp.com/support/zx6000">http://www.hp.com/support/zx6000</a> .

### ATI RADEON 7000 display, resolutions & refresh rates

<b>CRT Displays</b>			
Single CRT Display Resolution	Maximum Refresh Rate	Bits Per Pixel	
640x480	200Hz	8, 16, 32	
800x600	200Hz	8, 16, 32	
1024x768	200Hz	8, 16, 32	
1152x864	180Hz	8, 16, 32	
1280x1024	140Hz	8, 16, 32	
1600x1200	100Hz	8, 16, 32	
1920x1080	90Hz	8, 16, 32	
1920x1200	85Hz	8, 16, 32	
1920x1440	75Hz	8, 16, 32	
2048x1536	66Hz	8, 16, 32	
<b>Digital Displays</b>			
Single CRT Display Resolution	Maximum Refresh Rate	Bits per Pixel	
640x480	75Hz	8, 16, 32	
800x600	75Hz	8, 16, 32	
1024x768	75Hz	8, 16, 32	
1280x1024	75Hz	8, 16, 32	
1600x1200	60Hz	8, 16, 32	

### Technical Specifications

<b>ATI FireGL Z1-128p Graphics Card</b>	<b>Form Factor</b>	ATX
	<b>Graphics Controller</b>	ATI FGL 9700 GPU
	<b>Bus Type</b>	AGP-Pro50 1x/2x/4x/8x Version 3.0 compliant
	<b>RAMDAC</b>	Dual 400MHz/30-bit
	<b>Memory</b>	128 MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage
	<b>Connectors</b>	Dual DVI-I analog/digital monitor outputs
	<b>Slots required</b>	Occupies 2 physical slots in the system
	<b>Dimensions</b>	Single AGP/ATX card. 12.61 x 4.25 in (23.03 x 10.7 cm)
	<b>Multi-monitor support</b>	Dual Screen output for resolutions up to 2x2048x1536x32 bit
	<b>Additional product features</b>	256 MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage 64 KB BIOS Serial Flash ROM, reprogrammable by SW, 3.3V only, no Jumpers 2D and 3D acceleration provided for 16-bit and 32-bit RGB? modes Hardware cursor with full color alpha channel 16/32 bit Z buffer, 16/32 bit W-buffer, 8-bit stored alpha and 8-bit Stencil planes Bus mastering support for 2D/3D display lists and local memory vertex list execution Hardware lighting support for up to 8 lights Bilinear, Trilinear and Anisotropic texturing Cubic Environment and Perturbation Bump Mapping Projective Texture, 3D Texture and Video Texture support Full Scene Anti-Aliasing (FSAA) support with up to 6 subsamples Video Engine supports YCrCb (4:2:2, 4:1:0, 4:2:0) to RGB conversion Video scaling and up to 4x4 tap filtering supported for all YUV and RGB16/32 formats Per pixel quad buffering on all screen resolutions VESA compliant Stereoscopic Interface on MiniDin Connector Compliant with Microsoft/Intel PC2001 Workstation requirements Video Timings compliant with VESA DMT 1.0 and VESA GTF 1.0 specifications DDC2B+ Monitor support on all OS platforms ACPI Version 1.0b Power Management support (all modes)
	<b>AGP1x/2x/4x/8x Version 3.0 compliant including:</b>	Sideband Addressing AGP Texturing (Execute Mode) AGP Read and AGP Write Support 8X Fast write support
	<b>FGL 9700 GPU featuring:</b>	VGA controller supporting full standard feature set 2D Engine with 128-bit datapath processing multiple pixels per clock PIXEL TAPESTRY III, 3D rendering engine utilizing 2 parallel pipelines with two texture blending units each capable, of handling up to 8 texels in a single pass, delivering 2.4 Gigatexels/s fill rate CHARISMA ENGINE III, geometry unit utilizing 4 vertex processing engines, capable of executing two instructions per clock cycle each, thus yielding up to 200 million transformed, clipped and lit triangles per second. VIDEO IMMERSION III, industry leading video technology supporting MPEG 2 encode/decode Dual independent display controllers with 4K x 4K address space each 256-bit external frame buffer interface providing memory bandwidth of up to 20 GB per second
	<b>Supported graphics APIs</b>	OpenGL 1.3 ICD with immediate mode support for all OGL primitive types DirectX 8.1
	<b>Available graphics drivers</b>	HP-UX and Red Hat Linux Advanced Workstation 2.1 for Itanium. See <a href="http://www.hp.com/support/zx6000">http://www.hp.com/support/zx6000</a> .

### Technical Specifications

ATI FireGL Z1-128p display,  
resolutions & refresh  
rates

Resolution	CRT Display (Single or Dual) Maximum Refresh Rate	Bits per Pixel
640x480	100Hz	16, 24, 32
800x600	100Hz	16, 24, 32
1024x768	100Hz	16, 24, 32
1152x864	100Hz	16, 24, 32
1280x960	100Hz	16, 24, 32
1280x1024	100Hz	16, 24, 32
1600x1000	100Hz	16, 24, 32
1600x1024	76Hz	16, 24, 32
1600x1200	100Hz	16, 24, 32
1792x1344	100Hz	16, 24, 32
1920x1080	100Hz	16, 24, 32
1920x1200	100Hz	16, 24, 32
2048x1536	85Hz	16, 24, 32

Single CRT Display Resolution	Digital Display (Single or Dual) Maximum Refresh Rate	Bits per Pixel
640x480	75Hz	16, 24, 32
800x600	75Hz	16, 24, 32
1024x768	75Hz	16, 24, 32
1280x1024	75Hz	16, 24, 32
1600x1000	60Hz	16, 24, 32
1600x1200	60Hz	16, 24, 32
1920x1080	60Hz	16, 24, 32
1920x1200	60Hz	16, 24, 32

### Technical Specifications

<b>NVIDIA Quadro4 980 XGL Graphics Card</b>	<b>Form Factor</b>	ATX
	<b>Graphics Controller</b>	NVIDIA NV28GL GPU
	<b>Bus Type</b>	AGP 8X Version 3.0 compliant
	<b>RAMDAC</b>	Dual 350 MHz integrated
	<b>Memory</b>	128 MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage
	<b>Connectors</b>	2 DVI-I analog/digital monitor outputs, 1 3-pin Mini DIN stereo output
	<b>Dimensions</b>	AGP full height ATX card. 4.25 x 8.5 in (10.8 x 21.6 cm)
	<b>Multi-monitor support</b>	Dual integrated display controllers supporting up to 1920x1440 @ 85Hz on both displays
	<b>Additional product features</b>	<ul style="list-style-type: none"><li>● AGP8xVersion 3.0 compliant including</li><li>● Sideband Addressing</li><li>● AGP Texturing (Execute Mode)</li><li>● Fast writes support</li><li>● 128 MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage</li><li>● 128 KB BIOS 3.3V Flash ROM reprogrammable by SW</li></ul> NV28GL GPU featuring: <ul style="list-style-type: none"><li>● 300 MHz engine clock rate</li><li>● 325 MHz memory clock rate</li><li>● 128-bit memory interface</li><li>● VGA controller</li><li>● 4 parallel pixel pipelines</li><li>● 2 parallel geometry engines</li><li>● nfiniteFX II programmable Vertex and Pixel Shader technology</li><li>● Hardware Overlay Planes</li><li>● Hardware two-sided lighting</li><li>● Hardware accelerated antialiased points and lines</li><li>● Quad-buffered Stereo</li><li>● Diamond exit rule line rasterization for improved line quality</li><li>● 3D Texture support</li><li>● Occlusion Culling</li><li>● Frame synchronization</li><li>● Compliant with Microsoft/Intel PC2001 Workstation requirements</li><li>● Video Timings compliant with VESA DMT 1.0 and VESA GTF 1.0 specifications</li><li>● DDC2B+ Monitor support on all OS platforms</li><li>● ACPI Version 1.0b Power Management support (all modes)</li></ul>
	<b>Supported graphics APIs</b>	OpenGL 1.3 ICD with immediate mode support for all OGL primitive types DirectX 8
	<b>Available graphics drivers</b>	Red Hat Linux Advanced Workstation 2.1 for Itanium. See <a href="http://www.hp.com/support/zx6000">http://www.hp.com/support/zx6000</a> .

### Technical Specifications

#### NVIDIA Quadro4 980 XGL display, resolutions & refresh rates

Resolution	Monitor 1, 2 Analog/Digital Maximum Refresh Rate	Bits per Pixel
640x480	240Hz/240Hz	8, 16, 24, 32
800x600	240Hz/200Hz	8, 16, 24, 32
1024x768	170Hz/140Hz	8, 16, 24, 32
1152x864	170Hz/100Hz	8, 16, 24, 32
1280x720	150Hz/120Hz	8, 16, 24, 32
1280x960	150Hz/85Hz	8, 16, 24, 32
1280x1024	150Hz/75Hz	8, 16, 24, 32
1600x900	120Hz/75Hz	8, 16, 24, 32
1600x1024	100Hz/72Hz	8, 16, 24, 32
1600x1200	120Hz/60Hz	8, 16
1600x1200	100Hz/60Hz	24, 32
1920x1080	100Hz/No Digital Display Support	8, 16
1920x1080	85Hz/No Digital Display Support	24, 32
1920x1200	100Hz/No Digital Display Support	8, 16
1920x1200	85Hz/No Digital Display Support	24, 32
1920x1440	85Hz/No Digital Display Support	8, 16
1920x1440	75Hz/No Digital Display Support	24, 32
2048x1536	75Hz/No Digital Display Support	8, 16
2048x1536	60Hz/No Digital Display Support	24, 32

### Technical Specifications

<b>ATI FireGL X1-256p Graphics Card</b>	<b>Form Factor</b>	ATX
	<b>Graphics Controller</b>	ATI FGL 9700 GPU
	<b>Bus Type</b>	AGP-Pro50 1x/2x/4x/8x Version 3.0 compliant
	<b>RAMDAC</b>	Dual 400MHz / 30-bit
	<b>Memory</b>	256 MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage
	<b>Connectors</b>	Dual DVI-I analog/digital monitor outputs
	<b>Slots required</b>	Occupies 2 physical slots in the system
	<b>Dimensions</b>	Single AGP/ATX card. 9.06 x 4.25 in (23.01 x 10.8 cm)
	<b>Multi-monitor support</b>	Dual Screen output for resolutions up to 2x2048x1536x32 bit
	<b>Additional product features</b>	<p>256 MB DDR SDRAM unified frame buffer, Z-buffer and Texture storage</p> <p>64 KB BIOS Serial Flash ROM, reprogrammable by SW, 3.3V only, no Jumpers</p> <p>2D and 3D acceleration provided for 16-bit and 32-bit RGB? modes</p> <p>Hardware cursor with full color alpha channel</p> <p>16/32 bit Z buffer, 16/32 bit W-buffer, 8-bit stored alpha and 8-bit Stencil planes</p> <p>Bus mastering support for 2D/3D display lists and local memory vertex list execution</p> <p>Hardware lighting support for up to 8 lights</p> <p>Bilinear, Trilinear and Anisotropic texturing</p> <p>Cubic Environment and Perturbation Bump Mapping</p> <p>Projective Texture, 3D Texture and Video Texture support</p> <p>Full Scene Anti-Aliasing (FSAA) support with up to 6 subsamples</p> <p>Video Engine supports YCrCb (4:2:2, 4:1:0, 4:2:0) to RGB conversion</p> <p>Video scaling and up to 4x4 tap filtering supported for all YUV and RGB16/32 formats</p> <p>Per pixel quad buffering on all screen resolutions</p> <p>VESA compliant Stereoscopic Interface on MiniDin Connector</p> <p>Compliant with Microsoft/Intel PC2001 Workstation requirements</p> <p>Video Timings compliant with VESA DMT 1.0 and VESA GTF 1.0 specifications</p> <p>DDC2B+ Monitor support on all OS platforms</p> <p>ACPI Version 1.0b Power Management support (all modes)</p>
	<b>AGP1x/2x/4x/8x Version 3.0 compliant including:</b>	<p>Sideband Addressing</p> <p>AGP Texturing (Execute Mode)</p> <p>AGP Read and AGP Write Support</p> <p>8X Fast write support</p>
	<b>FGL 9700 GPU featuring:</b>	<p>VGA controller supporting full standard feature set</p> <p>2D Engine with 128-bit datapath processing multiple pixels per clock</p> <p>PIXEL TAPESTRY III, 3D rendering engine utilizing 2 parallel pipelines with two texture blending units each capable, of handling up to 8 texels in a single pass, delivering 2.4 Gigatexels/s fill rate</p> <p>CHARISMA ENGINE III, geometry unit utilizing 4 vertex processing engines, capable of executing two instructions per clock cycle each, thus yielding up to 200 million transformed, clipped and lit triangles per second.</p> <p>VIDEO IMMERSION III, industry leading video technology supporting MPEG 2 encode/decode</p> <p>Dual independent display controllers with 4K x 4K address space each</p> <p>256-bit external frame buffer interface providing memory bandwidth of up to 20 GB per second</p>
	<b>Supported graphics APIs</b>	OpenGL 1.3 ICD with immediate mode support for all OGL primitive types DirectX 8.1
	<b>Available graphics drivers</b>	HP-UX and Red Hat Linux Advanced Workstation 2.1 for Itanium. See <a href="http://www.hp.com/support/zx6000">http://www.hp.com/support/zx6000</a> .

### Technical Specifications

ATI FireGL X1-256p display,  
resolutions & refresh  
rates

Resolution	CRT Display (Single or Dual) Maximum Refresh Rate	Bits per Pixel
640x480	100Hz	16, 24
800x600	100Hz	16, 24
1024x768	100Hz	16, 24
1152x864	100Hz	16, 24
1280x960	100Hz	16, 24
1280x1024	100Hz	16, 24
1600x1000	100Hz	16, 24
1600x1024	76Hz	16, 24
1600x1200	100Hz	16, 24
1792x1344	100Hz	16, 24
1920x1080	100Hz	16, 24
1920x1200	100Hz	16, 24
2048x1536	85Hz	16, 24

Single CRT Display Resolution	Digital Display (Single or Dual) Maximum Refresh Rate	Bits per Pixel
640x480	75Hz	16, 24
800x600	75Hz	16, 24
1024x768	75Hz	16, 24
1280x1024	75Hz	16, 24
1600x1000	60Hz	16, 24
1600x1200	60Hz	16, 24
1920x1080	60Hz	16, 24
1920x1200	60Hz	16, 24

### Technical Specifications

<b>HP p1230 22-inch CRT Monitor</b>	<b>Tube Type</b>	Diamondtron NF Aperture Grille CRT
	<b>Picture Tube Size</b> (diagonal)	22 in (55 cm)
	<b>Viewable Image Area</b> (diagonal)	20 in (51 cm)
	<b>Aperture Grille Pitch</b>	0.24 mm
	<b>Screen Curvature</b>	Flat
	<b>Horizontal Frequency</b> (kHz)	30 to 140 kHz
	<b>Vertical Frequency</b> (Hz)	50 to 160 Hz
	<b>Maximum Resolution</b>	2048 x 1536 @ 85 Hz (GTF)
	<b>Recommended Resolution</b>	1600 x 1200 @ 85 Hz or 1280 x 1024 @ 85 Hz
	<b>Preset VESA Graphic Modes</b> (non-interlaced)	1920 x 1440 @ 60 Hz, 75 Hz
		1792 x 1344 @ 60 Hz, 75 Hz
		1600 x 1200 @ 75 Hz, 85 Hz
		1280 x 1024 @ 60 Hz, 75 Hz, 85 Hz
		1024 x 768 @ 75 Hz, 85 Hz
		800 x 600 @ 75 Hz, 85 Hz
		640 x 480 @ 60 Hz, 85 Hz
	<b>Preset MAC Mode</b>	1152 x 870 @ 75 Hz
	<b>Preset VGA Mode</b>	640 x 480 @ 60 Hz and 720 x 400 @ 70 Hz
	<b>Maximum Pixel Clock Speed</b>	420 MHz
	<b>User Programmable Modes</b>	15 (10 preset modes and 5 additional modes)
	<b>Anti-Glare</b>	Yes
	<b>Anti-Static</b>	Yes
	<b>Asset Control</b>	Yes
	<b>Default Color Temperature</b>	9300 K
	<b>Buttons or Switches</b>	OSD menu, brightness, contrast, Super Bright, dual input, power on/off
	<b>Languages</b>	English, Spanish, French, German, Italian, Japanese
	<b>User Controls</b>	Brightness, contrast, pincushion, pincushion balance, trapezoid, tilt (rotation), color temperature, degauss, parallelogram, individual color control, zoom, moiré cancellation, convergence, corner purity, image control, language, OSD control, factory reset
	<b>Plug and Play</b>	Yes, DDC/CI compatible
	<b>Input Signal</b>	Two 15-pin D-sub connections
	<b>Input Impedance</b>	75 ohms
	<b>Sync Input</b>	Separate sync (HSYNC/VSYNC)
	<b>Video Cable</b>	Detachable 15-pin D-sub mini connector (included)
<b>Video Cable Length</b>	70 in (1.8 m); non-captive	
<b>Power Supply</b>	Universal 100-120/220-240 VAC	
<b>Frequency</b>	50/60 Hz	
<b>Maximum</b>	135 watts	
<b>Power Saving</b>	2 watts maximum	
<b>Off Mode</b>	0 watts	
<b>Power Cable Length</b>	70 in (1.8 m); non-captive	
<b>Dimensions</b> (HxWxD)	<b>Unpacked</b>	19.1 x 19.5 x 18.8 in (48.6 x 49.5 x 47.7 cm) (including pedestal)
	<b>Packaged</b>	25.6 x 25.0 x 25.4 in (65.1 x 63.6 x 64.6 cm)



### Technical Specifications

<b>Weight</b>	<b>Unpacked</b>	66.1 lb (30 kg)
	<b>Packaged</b>	77.1 lb (35 kg)
<b>Tilt Range</b>	10° upward and 5° downward	
<b>Swivel Range</b>	90° either side of center	
<b>Temperature – Operating</b>	41° to 90° F (5° to 35° C) Non-condensing	
<b>Temperature – Non-operating</b>	-4° to 140° F (-20° to 60° C)	
<b>Humidity – Operating</b>	10% to 90% non-condensing	
<b>Humidity – Non-operating</b>	10% to 90%	
<b>Altitude – Operating</b>	0 to 7,200 ft (0 to 2,195 m)	
<b>Altitude – Non-operating</b>	0 to 30,000 ft (0 to 9,144 m)	
<b>Accessories Included</b>	Power cable, video cable (D-sub to D-sub), documentation kit	
<b>User Guide Languages</b>	English, French, German, Spanish, Italian, Dutch, Brazilian Portuguese, Danish, Finnish, Greek, Japanese, Korean, Latin American Spanish, Norwegian, Polish, Russian, Slovenian, Turkish, Swedish, Traditional Chinese, Simplified Chinese	
<b>Warranty Languages</b>	English, French, Spanish, Brazilian Portuguese, Danish, German, Castilian Spanish, French, Italian, Dutch, Norwegian, Finnish, Swedish, Bahasa Indonesian, Japanese, Korean, T. Chinese, S. Chinese	
<b>Color</b>	Carbon and silver	
<b>Certification and Compliance</b>	MPR-II (Low Emissions), TCO '03, Energy Star Compliant, UL Listing, ISO9241-3 VOT Guidelines Approval, FCC Approval, CE Mark (including PFC), GS Mark	
<b>Compatibility</b>	Compatible with platforms using the VESA standard video modes and HP Compaq Business Desktops d500, d300, and d200 Series, Compaq Evo Desktops, HP workstations, and HP Business Desktops d300 series.	
<b>Warranty</b>	Limited three-year parts and repair labor, service provider labor, and on-site service. Next business day advanced exchange direct replacement service available during warranty period. Certain restrictions and exclusions apply.	

<b>HP L1925 19-inch TFT Flat Panel Monitor</b>	<b>Panel</b>	<b>Type</b>	Thin film transistor (TFT)	
		<b>Viewable Image Area</b>	19 in (48.25 cm) maximum viewable (diagonal)	
		<b>Screen Opening (WxH)</b>	14.9 x 11.9 in (37.8 x 30.3 cm)	
		<b>Viewing Angle (typical)</b>	170 degrees horizontal/170 degrees vertical (10:1 minimum contrast ratio)	
		<b>Brightness (typical)</b>	Up to 250 nits (cd/m <sup>2</sup> )	
		<b>Contrast Ratio (typical)</b>	Up to 500:1 (typical)	
		<b>Response Rate (typical)</b>	<20 ms (typical rise + fall)	
		<b>Pixel Pitch</b>	0.294 mm	
		<b>Colour Depth Support</b>	16.7 million colours	
	<b>Video Input</b>	<b>Plug and Play</b>	Yes (supports VESA DDC2B; PC2001 compliant)	
		<b>Input Signal</b>	Two connectors: one 15-pin mini D-sub analog VGA; and one DVI-I (VGA analog or digital)	
		<b>Input Impedance</b>	75 ohms ± 2%	
		<b>Sync Input</b>	Separate sync (HSYNC/VSYNC); composite sync, Sync on Green	
		<b>Video Cable</b>	VGA and DVI-D	
	<b>Video Cable Length</b>	78 in (2.0 m)		
<b>Signal Interface/ Performance</b>	<b>Horizontal Frequency</b>	30 to 82 kHz		
	<b>Vertical Frequency</b>	56 to 75 Hz		

### Technical Specifications

	<b>Graphics Controller</b>	Pixelworks 131	
	<b>Native Resolution</b>	1280x1024@75Hz analog 1280x 1024@60Hz digital	
	<b>Maximum Resolution (Analog)</b>	1280x1024@75Hz analog	
	<b>Maximum Resolution (Digital)</b>	1280x1024@75Hz analog	
<b>On Screen Display (OSD) Controls</b>	<b>Preset VESA Graphic Modes (non-interlaced)</b>	640 x 480 @ 60 Hz, 72 Hz, 75 Hz 800 x 600 @ 60 Hz, 72 Hz, 75 Hz 1024 x 768 @ 60 Hz, 75 Hz 1280 x 1024 @ 60 Hz, 75 Hz	
	<b>Preset MAC Mode</b>	832 x 624 @ 75 Hz 1152 x 870 @75 Hz	
	<b>Preset VGA Mode</b>	640 x 480 @ 60 Hz, 72 Hz	
	<b>Preset SUN Mode</b>	1152x900@66Hz	
	<b>Fail Safe Mode</b>	Yes (limits out of range signal messages)	
	<b>Maximum Pixel Clock Speed</b>	140 MHz	
	<b>User Programmable Modes</b>	Yes, 10	
	<b>Anti-Glare</b>	Yes	
	<b>Anti-Static</b>	Yes	
	<b>AssetControl</b>	Yes (accessible on HP/Compaq desktops featuring Intelligent Manageability)	
	<b>Default Colour Temperature</b>	Yes (6500k, 9300k, Custom User)	
	<b>Buttons or Switches</b>	Power on/off; 4-button OSD; second level OSD buttons include auto adjust and dual-input switch	
		<b>Languages</b>	English, Spanish, French, German, Dutch, Italian
	<b>User Controls</b>	Size and Positioning Contrast Brightness Clock, Clock Phase Selectable Colour Temperature Input Selection Factory Reset Individual Colour Contrast Full-screen Resolution	
<b>Power</b>	<b>Power Supply</b>	Auto-ranging, 90 to 265 VAC; internal power supply, 47.5-63 Hz	
	<b>Input Power</b>	100 ~ 240 VAC	
	<b>Nominal Current</b>	1.5 A maximum	
	<b>Frequency</b>	50 ~ 60 Hz	
	<b>Average</b>	33 watts when displaying standard office software	
	<b>Maximum</b>	< 40 watts	
	<b>Power Saving</b>	< 2 watts	
	<b>Off Mode</b>	< 1 watts (switch off)	
	<b>Power Cable Length</b>	70 in (1.8 m); non-captive	
<b>Mechanical</b>	<b>Dimensions (H x W x D)</b>	<b>Unpacked w/ stand minimum height</b>	14.8 x 16.4 x 8.2 in (39.8 x 41.6 x 20.8 cm)
		<b>Unpacked w/ stand maximum height</b>	20 x 16.4 x 8.2 in (50.8 x 41.6 x 20.8 cm)
		<b>Base Area (Footprint d x w)</b>	8.2 x 12.2 in (20.8 x 30.9 cm)

### Technical Specifications

		<b>Panel only</b> (w/o stand) (h x w x d)	13.5 x 16.4 x 2.6 in (34.2 x 41.6 x 6.6 cm)
		<b>Packaged</b>	26.0 x 26.0 x 26.0 in (66.0 x 66.0 x 66.0 cm)
	<b>Weight</b>	<b>Unpacked w/ stand</b>	17.6 lb (8 kg)
		<b>Unpacked w/o stand</b>	12 lb (5.5 kg)
		<b>Packaged</b>	23.5 l (10.7 kg)
	<b>Tilt Range</b>		-5° to +20°
	<b>Swivel Range</b>		± 45° horizontal swivel
	<b>Height Adjustable</b>		Yes (4.3 in/110 mm adjustment range)
	<b>Pivot Rotation</b>		Yes, 90 °
	<b>Base</b>		Ships attached and is removable after installation
<b>Environmental</b>	<b>Temperature – Operating</b>		41° to 95° F (5° to 35° C)
	<b>Temperature – Non-operating</b>		-4° to 140° F (-20° to 60° C)
	<b>Humidity – Operating</b>		20% to 80%
	<b>Humidity – Non-operating</b>		5% to 95%
	<b>Altitude – Operating</b>		0 to 13,000 ft (0 to 4,000 m)
	<b>Altitude – Non-operating</b>		0 to 40,000 ft (0 to 12,192 m)
<b>Options</b>	<b>PC Comm Station</b>		Communication/audio hub that includes two stereo speakers (8 PMPO each), integrated microphone/dual function headset (phone and PC support), and USB port. Optional, part number 304251-008 (US) or P8814A (EMEA).
<b>Other</b>	<b>Accessories Included</b>		VGA cable, DVI-D cable, user CD-ROM with Portrait software
	<b>User Guide Languages</b>		English
	<b>Warranty Languages</b>		English
	<b>Colour</b>		Carbon/Silver
	<b>VESA Mounting</b>		Yes (swing arm/ wall mount not included; base is shipped attached and must be removed for mounting options)
	<b>VESA External Mounting</b>		Yes (Standard 4 hole pattern, 100 mm)
	<b>Kensington Lock-ready</b>		Yes
<b>Certification and Compliance</b>			Australian ACA Approval, Canadian Requirements/CSA, CE Marking, China CCIB/CCEE Approval, CISPR Requirements, Eastern European Approvals, Energy Star Compliant, FCC Approval, German Ergonomic (TUV and GS Mark), ISO 9241-3,7,8 VDT Guidelines, ISO 13406-2 Compliant (Pixel Defect Guidelines), Mexican NOM Approval, MIC Requirements (New Zealand), MPR-II Compliant, Nordic Approvals (Nemko, Fimko, Demko, Semko), PC2001 Compliant, PC99 Certified, S. Korean MIC Approval, Taiwan BSMI Approval, TCO 03 (emissions, ergonomics, environment), TUV-Ergo, UL Listed, VCCI Approvals.
<b>Compatibility</b>			VESA Video Signal Standard (VSIS) Compliant video cards have been tested and proven compatible for use with the HP Flat Panel Monitor L1925. The HP L1925 has been tested for use with all HP workstations.
			<b>NOTE:</b> Features are subject to change without notice.
<b>Service and Warranty</b>			Limited three-year parts and repair labour, service provider labour, and on-site service. Next Business Day advanced exchange direct replacement service available during warranty period. Certain restrictions and exclusions apply. For details, contact HP Customer Support at 970-635-1000 (USA) or 905-206-4663 (Canada).

### Technical Specifications

#### HP L2035 20-inch TFT Flat Panel Monitor

<b>Type</b>	20-inch Active Matrix TFT (thin film transistor)
<b>Viewable Image Area</b> (diagonal)	20.1 in (51 cm)
<b>Screen Opening</b> (W x H)	16.2 x 12.17 in (41.1 x 30.9 cm)
<b>Viewing Angle</b> (typical)*	Up to 170° H/170° V (10:1 minimum contrast ratio)
<b>Brightness</b> (typical)*	Up to 250 nits (cd/m <sup>2</sup> )
<b>Contrast Ratio</b> (typical)*	Up to 400:1
<b>Response Rate</b> (typical)*	16 ms (typical, rise + fall)
<b>Pixel Pitch</b>	0.255 mm
<b>Color Depth Support</b>	16.7 million colors

\*All specifications are provided by the component manufacturers. Performance specifications represent the highest specification of all HP's component manufacturers' typical level specifications for performance. Actual performance may vary either higher or lower.

#### On Screen Display (OSD) Controls

<b>Buttons or Switches</b>	PiP (Picture in Picture), Input select, auto adjust, OSD up, OSD down, OSD menu select, power
<b>Languages</b>	English, French, German, Spanish, Italian
<b>User Controls</b>	Brightness, contrast, positioning, color temperature, individual color control, serial number display, full screen resolutions, clock, clock phase, video picture-in-picture (size and position), input selection (includes separate direct access key for dedicated swap between inputs 1 and 2), factory reset

#### Signal Interface/ Performance

<b>Horizontal Frequency</b>	30 to 94 kHz (VGA input); 30 to 92 KHz (DVI input) (for modes with pixel clock less than 157 MHz)
<b>Vertical Frequency</b>	48 to 85 Hz (VGA input); 30 to 92 KHz (DVI input) (for modes with pixel clock less than 157 MHz)
<b>Graphics Controller</b>	Pixelworks PW171
<b>Native Resolution</b>	1600 x 1200 @ 60 Hz (recommended)
<b>Preset VESA Graphic Modes</b> (non-interlaced)	1600 x 1200 @ 60 Hz, 75 Hz (VGA input) 1280 x 1024 @ 60 Hz, 75 Hz, 85 Hz 1280 x 960 @ 60 Hz 1152 x 900 @ 66 Hz 1024 x 768 @ 60 Hz, 75 Hz, 85 Hz 800 x 600 @ 60 Hz, 85 Hz 640 x 480 @ 60 Hz, 75 Hz, 85 Hz
<b>Text Mode</b>	720 x 400 @ 70 Hz
<b>Mac Mode</b>	1152 x 870 @ 75 Hz and 832 x 624 @ 75 Hz
<b>Sun Mode</b>	1152 x 900 @ 66 Hz
<b>Maximum Pixel Clock Speed</b>	202 MHz (VGA input); 162 MHz (DVI input)
<b>User Programmable Modes</b>	Yes, 10
<b>Anti-Glare</b>	Yes
<b>Anti-Static</b>	Yes
<b>Default Color Temperature</b>	6500 K
<b>Plug and Play</b>	Yes
<b>Input Signal</b>	Four connectors, including one 15-pin mini D-sub VGA, one DVI-I (VGA analog and digital input), one composite video, and one s-video

#### Video Input

### Technical Specifications

	<b>Input Impedance</b>	75 ohms ± 10%		
	<b>Sync Input</b>	Separate sync (HSYNC/VSYNC); composite sync, Sync on Green		
	<b>Video Cable</b>	VGA to VGA; VGA to DVI-I; DVI-D to DVI-I		
	<b>Video Cable Length</b>	5.9 ft (1.8 m)		
<b>Power</b>	<b>Input Power</b>	Auto-Ranging, 90 to 132 VAC and 195 to 265 VAC; internal power supply, 50 Hz/60 Hz		
	<b>Frequency</b>	47.5 to 63 Hz		
	<b>Maximum</b>	< 75 watts		
	<b>Power Saving</b>	< 5 watts		
	<b>Power Cable Length</b>	5.9 ft (1.8 m)		
	<b>Mechanical</b>	<b>Dimensions (H x W x D)</b>	Unpacked w/stand	17.36 to 20.9 x 17.8 x 8.27 in (44.1 to 53.1 x 45.2 x 21.0 cm)
			Unpacked w/o stand (head only)	14.29 x 17.8 x 3.19 in (36.3 x 45.2 x 8.1 cm)
Packaged			11.5 x 21.9 x 23.9 in (29.2 x 55.6 x 60.6 cm)	
<b>Weight</b>		Unpacked	With stand: 20.28 lb (9.2 kg); Without stand: 12.35 lb (5.6 kg)	
		Packaged	26.9 lb (12.2 kg)	
		<b>Tilt Range</b>	-5° to + 25° vertical	
<b>Swivel Range</b>		-35° to + 35°		
<b>Height Adjustable</b>		Yes, range 3.54 in (9.0 cm)		
<b>Pivot Rotation</b>		Yes		
<b>Base</b>		Attached		
<b>Environmental</b>	<b>Temperature – Operating</b>	46° to 95° F (10° to 35° C)		
	<b>Temperature – Non-operating</b>	6° to 140° F (-10° to 60° C)		
	<b>Humidity – Operating</b>	20% to 80% non-condensing		
	<b>Humidity – Non-operating</b>	5% to 85%		
	<b>Altitude – Operating</b>	+12,000 ft		
	<b>Altitude – Non-operating</b>	+40,000 ft		
<b>Options</b>	<b>HP Desktop Access Center</b>	Sold separately, the HP Desktop Access Center features integrated microphone/headset jacks, dual function headset for phone/PC support, a MultiBay slot for adding an optical drive (sold separately), and four USB ports for easy integration of third-party digital solutions; part number DK985A. For more information, refer to the HP Desktop Access Center QuickSpecs.		
<b>Other</b>	<b>Accessories Included</b>	VGA to VGA cable – connects the graphic card's VGA analog connector to the monitor's input #1 (VGA analog) connector		
		VGA to DVI-I cable – connects the graphic card's VGA connector to the monitor's input #2 (DVI-I analog) connector		
		DVI-D to DVI-I cable – connects the graphic card's DVI-D digital connector to the monitor's input #2 (DVI-I digital) connector		
	<b>User Guide Languages</b>	English, B. Portuguese, French, LA Spanish, Korean, S. Chinese, T. Chinese, Bahasa, Japanese, Danish,		

### Technical Specifications

		Finnish, German, Norwegian, Spanish, Swedish, Greek, Polish, Russian, Slovenian, Turkish
	<b>Warranty Languages</b>	English, Canadian French, LA Spanish, Brazilian Portuguese, Danish, German, Castilian Spanish, French, Italian, Dutch, Norwegian, Finnish, Swedish, Bahasa Indonesian, Korean, T. Chinese, S. Chinese
	<b>Color</b>	Carbonite/Silver
	<b>VESA External Mounting</b>	Yes (Standard 4 hole pattern, 100 mm)
	<b>Kensington Lock-Ready</b>	Yes
<b>Certification and Compliance</b>		Australian ACA Approval, Canadian Requirements/CSA, CE Marking, China CCIB/CCEE Approval, CISPR Requirements, Eastern European Approvals, Energy Star Compliant, FCC Approval, German Ergonomic (TUV and GS Mark), ISO 9241-3,7,8 VDT Guidelines, ISO 13406-2 Pixel Defect Guidelines, Mexican NOM Approval, MIC Requirements (New Zealand), MPR-II Compliant, Nordic Approvals (Nemko, Fimko, Demko, Semko), PC2001 Compliant, PC99 Certified, S. Korean MIC Approval, Taiwan BSMI Approval, TCO 03 (emissions, ergonomics, environment), TUV-Ergo, UL Listed, VCCI Approvals.
<b>Compatibility</b>		Compatible with platforms using the VESA standard video modes and all HP workstations.
<b>Service and Warranty</b>		Limited three years parts, labor, and on-site service, including backlight. Availability varies by region. Certain restrictions and exclusions apply. Consult HP Customer Service for details.

#### HP L2335 23-inch TFT Widescreen Flat Panel Display

<b>Panel</b>	<b>Type</b>	23-inch Active Matrix TFT (thin film transistor)
	<b>Viewable Image Area (diagonal)</b>	23 in (58.4 cm)
	<b>Screen Opening (W x H)</b>	19.53 x 12.24 in (49.6 x 31.1 cm)
	<b>Viewing Angle (typical)*</b>	Up to 170° H/170° V (10:1 minimum contrast ratio)
	<b>Brightness (typical)*</b>	Up to 250 nits (cd/m <sup>2</sup> )
	<b>Contrast Ratio (typical)*</b>	Up to 350:1
	<b>Response Rate (typical)*</b>	25 ms (typical, rise + fall)
	<b>Pixel Pitch</b>	0.258 mm
	<b>Colour Depth Support</b>	16.7 million colours
	<i>* All specifications are provided by the component manufacturers. Performance specifications represent the highest specification of all HP's component manufacturers' typical level specifications for performance. Actual performance may vary either higher or lower.</i>	
<b>On Screen Display (OSD) Controls</b>	<b>Buttons or Switches</b>	PiP (Picture in Picture), Input Select, Auto Adjust, OSD Up, OSD Down, OSD Menu Select, Power
	<b>Languages</b>	English, French, German, Spanish, Italian
	<b>User Controls</b>	Brightness, contrast, positioning, colour temperature, individual colour control, serial number display, full screen resolutions, clock, clock phase, video picture-in-picture (size and position), input selection (includes separate direct access key for dedicated swap between inputs 1 and 2), factory reset
<b>Signal Interface/ Performance</b>	<b>Horizontal Frequency</b>	30 to 94 kHz (VGA input); 30 to 92 KHz (DVI input) (for modes with pixel clock less than 157 MHz)
	<b>Vertical Frequency</b>	48 to 85 Hz (VGA and DVI input)
	<b>Graphics Controller</b>	Pixelworks PW172
	<b>Native Resolution</b>	1920 x 1200 @ 60 Hz (recommended)
	<b>Preset VESA Graphic Modes (non-interlaced)</b>	1920 x 1200 @ 60Hz 1600 x 1200 @ 60 Hz, 75 Hz

### Technical Specifications

		1280 x 1024 @ 60 Hz, 75Hz, 85 Hz
		1280 x 960 @ 60 Hz
		1152 x 900 @ 66 Hz
		1024 x 768 @ 60 Hz, 75 Hz, 85 Hz
		800 x 600 @ 60 Hz, 75Hz
		640 x 480 @ 60 Hz, 75 Hz
		720 x 400 @ 70 Hz
	<b>Text Mode</b>	
	<b>Mac Mode</b>	1152 x 870 @ 75 Hz and 832 x 624 @ 75 Hz
	<b>Sun Mode</b>	1152 x 900 @ 66 Hz
	<b>Maximum Pixel Clock Speed</b>	202 MHz (VGA input); 162 MHz (DVI input)
	<b>User Programmable Modes</b>	Yes, 10
	<b>Anti-Glare</b>	Yes
	<b>Anti-Static</b>	Yes
	<b>Default Colour Temperature</b>	6500 K
<b>Video Input</b>	<b>Plug and Play</b>	Yes
	<b>Input Signal</b>	Five connectors, including one 15-pin mini D-sub VGA, one DVI-I (VGA analog and digital input), one composite video, one s-video, component video
	<b>Input Impedance</b>	75 ohms ± 10%
	<b>Sync Input</b>	Separate sync (HSYNC/VSYNC); composite sync, Sync on Green
	<b>Video Cable</b>	VGA to VGA; VGA to DVI-I; DVI-D to DVI-I
	<b>Video Cable Length</b>	5.9 ft (1.8 m)
<b>Power</b>	<b>Input Power</b>	Auto-Ranging, 90 to 132 VAC and 195 to 265 VAC; internal power supply, 50 Hz/60 Hz
	<b>Frequency</b>	47.5 to 63 Hz
	<b>Maximum</b>	< 100 watts
	<b>Power Saving</b>	< 5 watts
	<b>Power Cable Length</b>	5.9 ft (1.8 m)
<b>Mechanical</b>	<b>Dimensions (H x W x D)</b>	<b>Unpacked</b> 17.36 to 20.90 x 21.46 x 8.27 in (44.1 to 53.1 x 54.5 x 21.0 cm)
		<b>Unpacked w/o stand (head only)</b> 14.57 x 21.46 x 3.35 in (37.0 x 54.5 x 8.5 cm)
	<b>Weight</b>	<b>Unpacked</b> 22.27 lb (10.1 kg)
		<b>Packaged</b> 30.87 lb (14.0 kg)
	<b>Tilt Range</b>	-5° to + 25° vertical
	<b>Swivel Range</b>	-35° to + 35°
	<b>Height Adjustable</b>	Yes, range 3.54 in (9.0 cm)
	<b>Pivot Rotation</b>	Yes
	<b>Base</b>	Attached
<b>Environmental</b>	<b>Temperature – Operating</b>	46° to 95° F (10° to 35° C)
	<b>Temperature – Non-operating</b>	6° to 140° F (-10° to 60° C)
	<b>Humidity – Operating</b>	20% to 80% non-condensing
	<b>Humidity –</b>	5% to 85%

### Technical Specifications

	<b>Non-operating</b>	
	<b>Altitude – Operating</b>	+12,000 ft
	<b>Altitude – Non-operating</b>	+40,000 ft
<b>Options</b>	<b>HP Desktop Access Centre</b>	Sold separately, the HP Desktop Access Centre Features integrated microphone/headset jacks, dual function headset for phone/PC support, a MultiBay slot for adding an optical drive (sold separately), and four USB ports for easy integration of third-party digital solutions; part number DK985A. For more information, refer to the HP Desktop Access Centre QuickSpecs.
<b>Other</b>	<b>Accessories Included</b>	VGA to VGA cable – connects the graphic card's VGA analog connector to the monitor's input #1 (VGA analog) connector VGA to DVI-I cable – connects the graphic card's VGA connector to the monitor's input #2 (DVI-I analog) connector DVI-D to DVI-I cable – connects the graphic card's DVI-D digital connector to the monitor's input #2 (DVI-I digital) connector
	<b>User Guide Languages</b>	English, B. Portuguese, French, LA Spanish, Korean, S. Chinese, T. Chinese, Bahasa, Japanese, Danish, Finnish, German, Norwegian, Spanish, Swedish, Greek, Polish, Russian, Slovenian, Turkish
	<b>Warranty Languages</b>	English, Canadian French, LA Spanish, Brazilian Portuguese, Danish, German, Castilian Spanish, French, Italian, Dutch, Norwegian, Finnish, Swedish, Bahasa Indonesian, Korean, T. Chinese, S. Chinese
	<b>Colour</b>	Carbonite/silver
	<b>VESA External Mounting</b>	Yes (Standard 4 hole pattern, 100 mm)
	<b>Kensington Lock-Ready</b>	Yes
<b>Certification and Compliance</b>		Australian ACA Approval, Canadian Requirements/CSA, CE Marking, China CCIB/CCEE Approval, CISPR Requirements, Eastern European Approvals, Energy Star Compliant, FCC Approval, German Ergonomic (TUV and GS Mark), ISO 9241-3,7,8 VDT Guidelines, ISO 13406-2 Pixel Defect Guidelines, Mexican NOM Approval, MIC Requirements (New Zealand), MPR-II Compliant, Nordic Approvals (Nemko, Fimko, Demko, Semko), PC2001 Compliant, PC99 Certified, S. Korean MIC Approval, Taiwan BSMI Approval, TCO 03 (emissions, ergonomics, environment), TUV-Ergo, UL Listed, VCCI Approvals.
<b>Compatibility</b>		Compatible with platforms using the VESA standard video modes and all HP workstations.
<b>Service and Warranty</b>		Limited three years parts, labour, and on-site service, including backlight. Availability varies by region. Certain restrictions and exclusions apply. Consult HP Customer Service for details.

© Copyright 2003-2004 Hewlett-Packard Development Company, L.P.

The information contained herein is subject to change without notice.

Microsoft is a registered trademark of Microsoft Corporation in the U.S. and/or other countries. Intel and Pentium are registered trademarks of the Intel Corporation in the U.S. and/or other countries. All other product names mentioned herein may be trademarks of their respective companies.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.





## Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>