

hp vectra vl420
april 2002



mainstream PC with Intel® Pentium® 4 processor

Intel Pentium 4 performance at a mainstream price, with an innovative design and improved serviceability.

- **easy to deploy:** With 9- to 12-month product lifecycles, stable software images, and tools and services to centrally deploy your PCs and e-pcs, the HP professional line PCs help you reduce your workload and cost of deployment.
- **easy to manage:** Every professional line PC from HP comes with HP Tootools to let you manage both HP and non-HP PCs as well as servers, printers, and more. Combining the built-in manageability of HP professional line PCs with HP Tootools enables you to use fewer IT resources to manage more PCs. It complements and integrates with other network and software management solutions, such as HP OpenView and Microsoft® SMS.
- **easy to support:** HP professional line PCs are serviceable, they help you increase uptime, and keep support costs under control.

professional line PC



chipset

- Intel 845 chipset with SDRAM
- PC133 support, 400 MHz system bus, ATA/100 and 4 USB 1.1 ports (2 in front, 2 in rear)

processor

- Intel Pentium 4 latest available frequencies

graphics solutions

- professional performance and features: NVIDIA GeForce2 MX graphics AGP 4X card—32 MB; or ATI RAGE 128 Ultra graphics—32 MB
- mainstream performance and features: ATI RAGE 128 PRO GL graphics—16 MB; or NVIDIA TNT2 Vanta graphics—16 MB
- professional ultimate performance: NVIDIA GeForce3 Ti 200—64 MB

three packages

using the same software image:

- desktop (DT)—5 shelves, 4 slots
- minitower (MT)—6 shelves, 4 slots
- small form factor (SFF)—3 shelves, 4 slots
- three free PCI slots
- one AGP slot, used by graphics card

hard disk drives

- Ultra ATA/100: 40.0 GB (5400 rpm); 20.0 GB, 40.0 GB, or 80.0 GB (7200 rpm)
- Ultra 160 SCSI: 18 GB or 36 GB (10,000 rpm)



optical drives for three packages

on desktop and minitower models:

- 48X Max-speed IDE CD-ROM
- 16X/40X Max-speed IDE DVD-ROM
- 24X/10X/40X Max-speed IDE CD-RW

on small form factor models:

- 24X Max-speed CD-ROM
- 8X/24X Max-speed DVD-ROM
- 8X/8X/24X Max-speed CD-RW

input devices

- Internet USB keyboard
- USB optical scrolling mouse
- PS/2 keyboard
- PS/2 scrolling mouse
- Cordless keyboard and mouse kit

at a glance

new technology highlights

- Intel® Pentium 4 processor: 1.6 GHz, 1.7 GHz, 1.8 GHz, 1.9 GHz, 2.0A GHz, 2.2 GHz, 2.4 GHz (and latest available frequencies)
- Intel 845 chipset with:
 - Cost-effective memory support—SDRAM PC133
 - Three memory slots
 - 400 MHz Front Side Bus providing 3.2 GB/s system bandwidth
 - ATA/100
 - Four USB 1.1 ports
- Silent packages with new stylish design and improved serviceability:
 - Desktop (DT) (5 shelves, 4 slots)
 - Minitower (MT) (6 shelves, 4 slots)
 - Small form factor (SFF) (3 shelves, 4 slots), usable in vertical or horizontal positions
 - HP Ultraflow cooling system for improved reliability and minimum acoustic levels
- 64, 128, 256, or 512 MB SDRAM memory, expandable to 1.5 GB on three memory slots
- Choice of hard disk drives:
 - Ultra ATA/100: 40 GB (5400 rpm); 20 GB, 40 GB, or 80 GB (7200 rpm)
 - Ultra 160 SCSI: 18 GB or 36 GB (10,000 rpm)
- Choice of graphics solutions for outstanding 2D and 3D performance and visual quality:
 - Professional performance and features: NVIDIA GeForce2 MX graphics card with 32 MB video memory (MT and DT are dual display capable with TwinView dual-display architecture; the SFF is single display capable only); or ATI RAGE 128 Ultra graphics card with 32 MB video memory
 - Mainstream performance and features: ATI RAGE 128 PRO GL graphics card with 16 MB video memory; or NVIDIA TNT2 Vanta with 16 MB video memory

- Professional ultimate performance: NVIDIA GeForce3 Ti 200 graphics AGP 4X card with 64 MB video memory (MT only)

- Range of fast optical storage devices:
 - on desktop and minitower models:
 - 48X Max-speed CD-ROM
 - 16X/40X Max-speed DVD-ROM
 - or 24X/10X/40X Max-speed CD-RW
 - on small form factor models:
 - 24X Max-speed CD-ROM
 - 8X/24X Max-speed DVD-ROM
 - 8X/8X/24X Max-speed CD-RW
- 16-bit stereo full-duplex integrated sound with stereo headphones and internal speaker option; optional digital 3D sound with Sound Blaster Live! 5.1 PCI card (DT and MT only)
- Integrated Intel PRO/100 VE LAN interface or optional 3Com LAN card; modem: PCI modem (US only); USB external modem (availability varies by country)
- Choice of operating systems:
 - Microsoft Windows® XP Professional¹
 - Microsoft Windows XP Home Edition
 - Microsoft Windows 2000 Professional²
 - Linux Mandrake 8.02³
 - Linux enabled: Certified by Linuxcare (Caldera, Mandrake, Red Hat, SuSE, Turbolinux)

¹ With Microsoft Windows 2000 Professional downgrade on CD-ROM.

² With Microsoft Windows NT® Workstation 4.0 downgrade on CD-ROM.

³ This software is shipped in the box. Its availability may vary by country.

HP PCs use genuine Windows® Operating Systems
www.microsoft.com/piracy/howtotell

configurations and models

product number	form factor	processor	cache	memory (standard/max.)	hard disk	optical storage	audio	graphics	video RAM	LAN card	operating system
A8380T	Desktop	Pentium 4 1.8 GB	256 KB ATC	256/1536 MB SDRAM	40 GB	48X CD-ROM	Int. AC '97	ATI Rage 128 Ultra	32/32 MB DDR SDRAM	Intel 10/100 Integrated	Windows XP Home Edition
A8386T	Desktop	Pentium 4 1.8 GB	256 KB ATC	256/1536 MB SDRAM	20 GB	48X CD-ROM	Int. AC '97	ATI Rage 128 Ultra	32/32 MB DDR SDRAM	Intel 10/100 Integrated	Windows XP Pro/2000
A8181S	Desktop	Pentium 4 1.9 GB	256 KB ATC	256/1536 MB SDRAM	40 GB	48X CD-ROM	Int. AC '97	ATI Rage 128 PRO	16/16 MB DDR SDRAM	Intel 10/100 Integrated	Windows 2000/NT
A8387T	Minitower	Pentium 4 1.8 GB	256 KB ATC	256/1536 MB SDRAM	40 GB	48X CD-ROM	Int. AC '97	ATI Rage 128 Ultra	32/32 MB DDR SDRAM	Intel 10/100 Integrated	Windows XP Pro/2000
A8383T	Minitower	Pentium 4 1.8 GB	256 KB ATC	512/1536 MB SDRAM	80 GB	48X CD-ROM	Int. AC '97	ATI Rage 128 Ultra	32/32 MB SDRAM	Intel 10/100 Integrated	Windows XP Pro/2000
A8526T	Small Form Factor	Pentium 4 1.7 GB	256 KB ATC	128/1536 MB SDRAM	20 GB	24X CD-ROM	Int. AC '97	ATI Rage 128 PRO	16/16 MB SDRAM	Intel 10/100 Integrated	Windows XP Home Edition
A8182S	Small Form Factor	Pentium 4 1.8 GB	256 KB ATC	256/1536 MB SDRAM	40 GB	24X CD-ROM	Int. AC '97	ATI Rage 128 PRO	16/16 MB SDRAM	Intel 10/100 Integrated	Windows XP Pro/2000

monitors

HP has the right monitor for you at the right price. Detailed information is available at: www.hp.com/go/monitors

	commercial name	hp part number	CRT size/ VIS*	dot/pixel pitch	recommended resolution/ max resolution (@xxHz)	horizontal frequency
CRT monitors						
15" essential	hp 56	P4795A	15.0 in. 13.8 in. viewable area	0.28 mm	800 x 600 @ 85 Hz 1024 x 768 @ 60 Hz	30–54 kHz
17" essential	hp 72	D8904A	17.0 in. 15.9 in. viewable area	0.27 mm	1024 x 768 @ 85 Hz 1280 x 1024 @ 60 Hz	30–70 kHz
17" professional (flat CRT)	hp p720	D8907A	17.0 in. 16.0 in. viewable area	0.25 mm	1024 x 768 @ 85 Hz 1280 x 1024 @ 75 Hz	30–85 kHz
19" essential	hp 92	P4815A	19.0 in. 18.0 in. viewable area	0.26 mm	1280 x 1024 @ 85 Hz 1600 x 1200 @ 75 Hz	30–95 kHz
19" professional (flat CRT)	hp p920	D8912A	19.0 in. 18.0 in. viewable area	0.24 mm	1280 x 1024 @ 85 Hz 1920 x 1440 @ 70Hz	29–107 kHz
21" professional (flat CRT)	hp p1130	P4819A	21.0 in. 19.8 in. viewable area	0.24 mm	1600 x 1200 @ 85 Hz 2048 x 1536 @ 85Hz	30–130 kHz
LCD monitors						
15" professional	hp l1520	D5063A D5063M	15.0 in. 15.0 in. viewable area	N/A	1024 x 768 @ 60 Hz 1024 x 768 @ 75 Hz	N/A
17" professional	hp l1720	D5064A D5064M	17.0 in. 17.0 in. viewable area	N/A	1280 x 1024 @ 60 Hz 1600 x 1200 @ 60 Hz	N/A
18" professional	hp l1820	D5960A	18.0 in. 18.1 in. viewable area	N/A	1280 x 1024 @ 60 Hz 1600 x 1200 @ 60 Hz	N/A

*viewable image size

Go to the HP monitor advisor tool at: www.hp.com/go/monitors and select "Help me choose my HP monitor" for assistance in choosing the appropriate HP monitor. When selecting a monitor, you should take into consideration the main application running on your PC, as well as any other criteria such as cost and space requirements.

accessories and services

v1420 accessories

memory	HP 128 MB non-ECC 133 MHz SDRAM	P1537A
	HP 256 MB non-ECC 133 MHz SDRAM	P1538A
	HP 512 MB non-ECC 133 MHz SDRAM	P5090A
hard disk drive	HP 20 GB Ultra ATA/100 7200 rpm	P1541A
	HP 80 GB Ultra ATA/100 7200 rpm	P1542A
	HP 18 GB Ultra 160 SCSI 10,000 rpm (requires SCSI adapter)	D8609B
adapter card	HP Adaptec Ultra 160 SCSI adapter card	P2280A
	HP one serial port extension kit	P5099A
graphics card	HP NVIDIA GeForce2 GTS 32 MB graphics card	P1971A
	HP NVIDIA GeForce2 MX 32 MB DualHead graphics card	P2289A
communications	HP 802.11b USB wireless LAN	P1980A
	HP 802.11b wireless LAN small business access point	P1981A
	HP 802.11b wireless LAN corporate access point	F2135A
	HP 10/100BT PCI LAN card	D7508C
	HP 3Com FastEtherlink 3C905C-TX PCI NIC	D7522B
	HP 3COM FastEtherlink 3C905C-TX PCI NIC	D7522C
	HP 56K V90 external USB e-modem	P1979A
	HP PCI modem, U.S. only	P5091A
optical-removable storage	HP 24X Max-speed slim CD-ROM drive	P1549A
	HP 48X Max-speed IDE CD-ROM drive	D9444A
	HP 24X/10X/40X Max-speed IDE CD-RW drive	P1543B
	HP 8X Max-speed slim DVD-ROM drive	P1545A
	HP 8X Max-speed slim CD-RW drive	P5092A
	HP USB external CD-RW drive (CPSS)	C4505A
	HP IDE/ATAPI DVD-Writer dvd100i drive	C9619A
	HP 250MB ATAPI II internal Zip drive	P1983A
	HP USB CompactFlash reader	P1977A
	HP L1520 front glass protection	P5096A
audio and multimedia	HP external amplified speakers 9.6-watt RMS	P1534A
	HP internal speaker in bulk	P1967A
	HP headset with microphone	P1968A
	HP external USB web camera	P1978A
	HP multimedia monitor base (audio speaker in CRT base)	P1535A
input device	HP cordless keyboard and mouse kit	P5911A
	HP Windows keyboard	C4735B
	HP USB Internet keyboard	C4768B
	HP scrolling mouse	C4736B
	HP multimedia keyboard	C4742B
	HP USB scrolling optical mouse	C4766A
security accessories	HP master pass key system kit	D6655C
	HP spare master pass key	D6658B
	HP locks for master pass key system option 1 (desktop), set of 50	D6659A
	HP locks for master pass key system option 2 (minitower), set of 50	D9528A
	HP Kensington lock	F1645A
	HP 50 locks for master pass key (option 3)	P1550A

service and support

warranty	<ul style="list-style-type: none"> • A three-year next business day on-site international hardware warranty and a full range of flexible warranty options and Supportpacks
support	<p>24 hours a day, 7 days a week, there is always a way to reach HP support:</p> <ul style="list-style-type: none"> • Web technical support including BIOS and driver updates, white papers, and additional product information • HP 3-year free hardware diagnostic phone support (24 hours a day, 7 days a week in U.S., standard business hours in other regions) <p>For more information, go to www.hp.com/go/vectrasupport and click on Assistance to find the telephone number of the HP Customer Care Center near you.</p> <p>In an effort to provide customers predictable cost structures and business efficiency gain, HP offers a comprehensive set of services, including Consulting, Outsourcing, Support, Education, and Finance. To find more information go to the HP Services Web site at www.hp.com/hps/.</p>

PC system features

processor	<ul style="list-style-type: none">• Intel Pentium 4: 1.6 GHz, 1.7 GHz, 1.8 GHz, 1.9 GHz, 2.0A GHz, 2.2 GHz, 2.4 GHz (and latest available frequencies)
chipset	<ul style="list-style-type: none">• Intel 845 chipset with SDRAM PC133 support, 400 MHz system bus, ATA/100, and 4 USB 1.1 ports
cache	<ul style="list-style-type: none">• 256 KB level-2 integrated on frequencies up to 2.0 GHz; 512 KB level-2 integrated on frequencies of 2.0A GHz and above
memory	<ul style="list-style-type: none">• 64, 128, 256, or 512 MB 133 MHz synchronous DRAM (non-ECC) standard (PC 133 specification):<ul style="list-style-type: none">– Expandable to 3.0 GB through three memory sockets (currently 1.5 GB until 1.0 GB module availability)– Auto-detection of memory modules via serial presence detect (SPD)– Three memory slots
hard disk drive	<ul style="list-style-type: none">• Choice of hard disk drive technologies:<ul style="list-style-type: none">– Ultra ATA/100: 20.0 GB, 40.0 GB, or 80.0 GB (7200 rpm) with SMART II (self-monitoring analysis and reporting technology)– Ultra 160 SCSI: 18 GB or 36 GB (10,000 rpm) (SCSI interface card required)
hard disk controller	<ul style="list-style-type: none">• PCI Bus Master Ultra ATA controller<ul style="list-style-type: none">– Support for Ultra ATA/100, PIO (up to Mode 4), DMA Mode 2, and Ultra DMA Mode– Up to four Fast-IDE devices supported, including two hard disk drives and two ATAPI devices (CD-ROM drive, DVD-ROM drive, CD-RW drive, or any ATAPI device)
floppy disk drive	<ul style="list-style-type: none">• Third-height, 3.5-inch, 1.44 MB floppy disk drive preinstalled
optical storage	<p>Choice of CD-ROM, DVD-ROM, and CD-RW solutions</p> <p>for desktop and minitower models:</p> <ul style="list-style-type: none">– HP 48X Max-speed IDE CD-ROM drive– HP 16X/40X Max-speed IDE DVD-ROM drive (includes WinDVD, MPEG-2 decoding software from InterVideo)– HP 24X/10X/40X Max-speed IDE CD-RW drive (includes RecordNow media-recording software and DLA software from VERITAS) <p>for small form factor models:</p> <ul style="list-style-type: none">– HP 24X Max-speed IDE CD-ROM drive– HP 8X/24X Max-speed IDE DVD-ROM drive (WinDVD, MPEG-2 decoding software from InterVideo included)– HP 8X/8X/24X Max-speed IDE CD-RW drive (includes RecordNow media recording software and DLA software from VERITAS)
package	<ul style="list-style-type: none">• Three packages using the same system board, same BIOS, same software image, and same main components:<ul style="list-style-type: none">– Desktop (5 shelves, 4 slots)– Minitower (6 shelves, 4 slots)– Small form factor (3 shelves, 4 slots)• New stylish design• HP Ultraflow cooling system for improved reliability and minimum acoustic levels• Improved serviceability• Easy access for quick upgrade or service: instant opening, screwless I/O release, easy extraction of drive trays
mass storage shelves	<ul style="list-style-type: none">• Desktop—five shelves:<ul style="list-style-type: none">– One front-accessible shelf for standard, third-height, 3.5-inch floppy disk drive preinstalled– Two front-accessible shelves for standard, half-height, 5.25-inch devices (CD-ROM drive preinstalled in one shelf on selected models)– Two internal shelves for standard, third-height, 3.5-inch hard disk drive (one preinstalled)• Minitower—six shelves:<ul style="list-style-type: none">– One front-accessible shelf for standard, third-height, 3.5-inch floppy disk drive preinstalled– Three front-accessible shelves for standard, half-height, 5.25-inch devices; two full-length (CD-ROM drive preinstalled in one shelf on most models), one for half-length devices– Two internal shelves for standard, third-height, 3.5-inch hard disk drive (one preinstalled)• Small form factor—three shelves:<ul style="list-style-type: none">– One front-accessible shelf for standard, third-height, 3.5-inch floppy disk drive preinstalled– One front-accessible shelf for slim-height, 5.25-inch devices (CD-ROM drive preinstalled on selected models)– One front-accessible shelf for standard, third-height, 3.5-inch hard disk drive (one preinstalled)
total expansion slots	<p>Four slots on desktop, minitower, and small form factor models:</p> <ul style="list-style-type: none">– Three full-length PCI slots (for full height PCI card for DT/MT; for half-height/low profile PCI cards for SFF)– One AGP slot, used by graphics card (for full-height PCI card for DT/MT; for half-height/low-profile AGP card for SFF)
audio subsystem	<ul style="list-style-type: none">• Integrated Analog Devices AD1885 AC '97 CODEC audio• 16-bit stereo audio recording and playback• Full-duplex audio• 92 dB (A-weighted) signal-to-noise ratio (PC-D-A)• External connectors for microphone, stereo input, and stereo output for amplified speakers or 32 ohms headphone• Internal amplified speaker or headphone as option or optional Sound Blaster Live! 5.1 PCI sound card• Digital 3D high audio quality• 5.1 surround sound (either digital or analog output)• Speaker and line-out, microphone, and line-in• EMU10K1 Digital Signal Processor, EAX processor• Wave table (64 voices HW, 1024 SW)<ul style="list-style-type: none">Real time digital effects (reverb, chorus, echo, vocal morpher)• Audio drivers, including Microsoft Windows XP Professional, Microsoft Windows XP Home Edition, Microsoft Windows 2000 Professional, Microsoft Windows NT Workstation 4.0, and Microsoft Windows 98 Second Edition are available from the HP desktop PC support Web site at: www.hp.com/go/vectrasupport

PC system features (continued)

ports	<ul style="list-style-type: none"> • One 25-pin parallel port (ECP/EPP bi-directional Centronics supporting IEEE 1284) • Two 9-pin serial ports (16550 UART) • Two PS/2 connectors for keyboard and mouse (Mini-DIN) • Four Universal Serial Bus (USB) ports for easy reconfiguration, attachment, and hot-swapping of external peripherals • Audio ports (stereo-in, stereo-out, microphone-in) • One RJ-45 Ethernet port (10Base-T/100Base-TX) • Graphics connector, depending on installed graphics card: <ul style="list-style-type: none"> – NVIDIA GeForce2 MX: desktop and minitower—one primary VGA and one DVI output (includes one DVI to VGA connector for 2X VGA); small form factor—one VGA connector – NVIDIA GeForce3 Ti 200: one connector either DVI or VGA capable – ATI RAGE 128 Ultra: one VGA connector – ATI RAGE 128 Pro: one VGA connector • NVIDIA TNT2 Vanta: one VGA connector 																							
keyboard	<ul style="list-style-type: none"> • Choice of: <ul style="list-style-type: none"> – Standard PS/2 keyboard – Internet USB keyboard featuring instant PC sleep and four reprogrammable hotkeys 																							
mouse	<ul style="list-style-type: none"> • Choice of: <ul style="list-style-type: none"> – PS/2 Scrolling mouse – USB optical scrolling mouse 																							
upgradability	<ul style="list-style-type: none"> • BIOS in flash EEPROM for convenient BIOS upgrades • Memory upgradable using SDRAM 133 MHz non-ECC DIMMs, up to 1.5 GB • Hard disk storage upgradable to two disks on desktop and minitower models 																							
hp e-diagtools	<ul style="list-style-type: none"> • Available by pressing F10 after system boot • Pre-boot diagnostic • Full system diagnostics • Proactive BIOS upgrades • HP Instant Support tuner preloaded 																							
physical characteristics	<ul style="list-style-type: none"> • system <ul style="list-style-type: none"> – dimensions (without keyboard) – weight (without keyboard & display) 	<table border="1"> <thead> <tr> <th></th> <th>metric</th> <th>non-metric</th> </tr> </thead> <tbody> <tr> <td>desktop</td> <td>43.5 cm wide x 43 cm deep x 13.5 cm high</td> <td>17.1 in. wide x 16.9 in. deep x 5.3 in. high</td> </tr> <tr> <td>minitower</td> <td>20.5 cm wide x 44.7 cm deep x 47.6 cm high</td> <td>8.1 in. wide x 17.6 in. deep x 18.7 in. high</td> </tr> <tr> <td>small form factor</td> <td>40.5 cm wide x 34.0 cm deep x 9.5 cm high</td> <td>15.6 in wide x 13.4 in deep x 3.7 in high</td> </tr> <tr> <td>desktop</td> <td>10 kg</td> <td>22 lb</td> </tr> <tr> <td>minitower</td> <td>13.4 kg</td> <td>29.5 lb</td> </tr> <tr> <td>small form factor</td> <td>9.2 kg</td> <td>20.4 lb</td> </tr> </tbody> </table>		metric	non-metric	desktop	43.5 cm wide x 43 cm deep x 13.5 cm high	17.1 in. wide x 16.9 in. deep x 5.3 in. high	minitower	20.5 cm wide x 44.7 cm deep x 47.6 cm high	8.1 in. wide x 17.6 in. deep x 18.7 in. high	small form factor	40.5 cm wide x 34.0 cm deep x 9.5 cm high	15.6 in wide x 13.4 in deep x 3.7 in high	desktop	10 kg	22 lb	minitower	13.4 kg	29.5 lb	small form factor	9.2 kg	20.4 lb	
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environmental conditions	<ul style="list-style-type: none"> • temperature <ul style="list-style-type: none"> – operating – non-operating • humidity <ul style="list-style-type: none"> – operating – non-operating 	<table border="1"> <tbody> <tr> <td>5° to 35°C</td> <td>41° to 95°F</td> </tr> <tr> <td>–40° to 70°C</td> <td>–40° to 158°F</td> </tr> <tr> <td>15% to 80% RH</td> <td>15% to 80% RH</td> </tr> <tr> <td>8% to 85% RH (noncondensing) at 40°C</td> <td>8% to 85% RH (noncondensing) at 104°F</td> </tr> </tbody> </table>	5° to 35°C	41° to 95°F	–40° to 70°C	–40° to 158°F	15% to 80% RH	15% to 80% RH	8% to 85% RH (noncondensing) at 40°C	8% to 85% RH (noncondensing) at 104°F														
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electrical characteristics	<ul style="list-style-type: none"> • input voltage <ul style="list-style-type: none"> – power supply: manual switch-selectable worldwide – frequency • power consumption <ul style="list-style-type: none"> – typical consumption (max) • power availability <ul style="list-style-type: none"> continuous 	<table border="1"> <tbody> <tr> <td>100–127 VAC or 200–240 VAC</td> </tr> <tr> <td>50 Hz/60 Hz</td> </tr> <tr> <td>45 W</td> </tr> <tr> <td>desktop</td> <td>185 W AC continuous</td> </tr> <tr> <td>minitower</td> <td>250 W AC continuous</td> </tr> <tr> <td>small form factor</td> <td>160 W AC continuous</td> </tr> </tbody> </table>	100–127 VAC or 200–240 VAC	50 Hz/60 Hz	45 W	desktop	185 W AC continuous	minitower	250 W AC continuous	small form factor	160 W AC continuous													
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acoustic emission (sound level)*	<ul style="list-style-type: none"> • sound power level (LwA, idle): <ul style="list-style-type: none"> – desktop – minitower – small form factor • sound pressure level (LpA, idle): <ul style="list-style-type: none"> – desktop – minitower – small form factor 	<table border="1"> <tbody> <tr> <td>≤ 3.5 B(A)</td> </tr> <tr> <td>≤ 3.6 B(A)</td> </tr> <tr> <td>≤ 3.2 B(A)</td> </tr> <tr> <td>≤ 28 dB(A)</td> </tr> <tr> <td>≤ 22 dB(A)</td> </tr> <tr> <td>≤ 29 dB(A)</td> </tr> </tbody> </table>	≤ 3.5 B(A)	≤ 3.6 B(A)	≤ 3.2 B(A)	≤ 28 dB(A)	≤ 22 dB(A)	≤ 29 dB(A)																
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* Industry best in class

graphics subsystems

NVIDIA GeForce2 MX graphics

video graphics	Professional 2D/3D graphics performance <ul style="list-style-type: none">• Dual-monitor support in a single AGP slot¹• DVI-I for digital flat panel support²• 256-bit graphics architecture• 350 MHz RAMDAC• TwinView dual-display architecture with one primary VGA and one DVI output to drive two monitors independently³• DVI-to-VGA converter included to allow use of two VGA monitors²• DDC2B support for Plug-&Play detection of monitor• DVD/MPEG2 playback• Second-generation transform and lighting engines• 32-bit color• 32-bit Z/stencil buffer• Microsoft DirectX 8a and OpenGL optimizations and support
graphics memory	<ul style="list-style-type: none">• 32 MB SDRAM (not upgradable)
available graphics drivers	<ul style="list-style-type: none">• HP-tested Microsoft Windows XP Professional• HP-tested Microsoft Windows XP Home Edition• HP-tested Microsoft Windows 2000 Professional• HP-tested Microsoft Windows NT Workstation 4.0• HP-tested Microsoft Windows 98 Second Edition• HP-tested Linux Drivers may be preloaded or available from HP desktop PC support Web site: www.hp.com/go/vectrasupport
recommended resolution	<ul style="list-style-type: none">• 32-bit: 1280 x 1024 at 85 Hz
minimum resolution	<ul style="list-style-type: none">• 8-bit: 640 x 480 at 60 Hz
maximum resolution	<ul style="list-style-type: none">• 32-bit: 1920 x 1200 at 85 Hz

¹ Desktop/mini-tower models have dual monitor support; small form factor configurations have single monitor support only.

² For desktop and mini-tower models only.

³ Desktop and mini-tower form factors; small form factor AGP card has only one video output via VGA port.

ATI Rage 128 PRO GL graphics

video graphics	Mainstream 2D/3D graphics performance <ul style="list-style-type: none">• Powered by ATI Rage 128 PRO chip• Full AGP 2X/AGP 4X support (up to 1 GB/s bandwidth)• 128-bit 2D engine• Floating-point 3D setup engine with complete 3D primitive support• High-quality DVD/MPEG2 playback with iDCT and motion compensation support• DirectX 8 and OpenGL hardware acceleration• Integrated triple 8-bit palette 250 MHz RAMDAC with video gamma adjustment• DDC2B support for Plug-&Play detection of monitor• 16/10 monitor support• Support for 32-bit true color (16.7 million colors) at resolutions up to 1920x1440• Twin-cache architecture to maximize texture and pixel throughput
graphics memory	<ul style="list-style-type: none">• 16 MB SDRAM (not upgradable)
available graphics drivers	<ul style="list-style-type: none">• HP-tested Microsoft Windows XP Professional• HP-tested Microsoft Windows XP Home Edition• HP-tested Microsoft Windows 2000 Professional• HP-tested Microsoft Windows NT Workstation 4.0• HP-tested Microsoft Windows 98 Second Edition• HP-tested Linux Drivers may be preloaded or available from HP desktop PC support Web site: www.hp.com/go/vectrasupport
recommended resolution	<ul style="list-style-type: none">• 32 bit: 1024 x 762 x at 85 Hz
minimum resolution	<ul style="list-style-type: none">• 8-bit: 640 x 480 at 60 Hz
maximum resolution	<ul style="list-style-type: none">• 24-bit: 1600 x 1200 at 85 Hz

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NVIDIA GeForce 3 Ti 200

video graphics

- Ultimate DirectX/Direct3D graphics performance: AGP 4X with fast writes
- 2.8 billion AA samples/sec fill rate
- 700 billion operations per second
- 256 bit graphics accelerator
- 350 MHz RAMDAC
- High quality DVD/HDTV video playback, and motion compensation MPEG-2 decoding
- High-Definition Video Processor (HDVP), for full screen, full frame HDTV/DVD video playback
- Advanced generation transform and lighting engines
- Nfinite FX, programmable engine, off-loading graphics-intensive workload from CPU
- Programmable vertex shaders and programmable pixel shaders
- High Resolution anti-aliasing featuring Quincunx AA mode, increasing visual quality
- Lightspeed memory technology for unmatched performance, memory efficiency
- Single monitor support with choice of: VGA, DB15, VESA DDC2B support for Plug-&Play detection of monitor
- DVI-D 1.0 digital output
- Microsoft DirectX 8.1 and OpenGL 1.3

graphics memory

- 64 MB DDR SDRAM video memory (not upgradable)

available graphics drivers

- HP-tested Microsoft Windows XP Professional
 - HP-tested Microsoft Windows XP Home Edition
 - HP-tested Microsoft Windows 2000 Professional
 - HP-tested Microsoft Windows NT Workstation 4.0
- Drivers may be preloaded or available from HP desktop PC support Web site: www.hp.com/go/vectrasupport

recommended resolution

- 32-bit: 1280 x 1024 at 85 Hz

minimum resolution

- 8-bit: 640 x 480 at 60 Hz

maximum resolution

- (Analog) 32-bit, 2048 x 1536 at 60Hz, (digital) 1600 x 1200

NVIDIA TNT2 Vanta graphics

video graphics

Mainstream 2D/3D graphics performance

- 128-bit graphics architecture
- AGP 4X graphics bus
- 250 MHz RAMDAC
- DDC2B support for Plug-&Play detection of monitor
- DVD/MPEG-2 playback
- 32-bit color
- 32-bit Z/stencil buffer
- Microsoft DirectX 8a and OpenGL optimizations and support

graphics memory

- 16 MB SDRAM (not upgradable)

available graphics drivers

- HP-tested Microsoft Windows XP Professional
 - HP-tested Microsoft Windows XP Home Edition
 - HP-tested Microsoft Windows 2000 Professional
 - HP-tested Microsoft Windows NT Workstation 4.0
 - HP-tested Microsoft Windows 98 Second Edition
 - HP-tested Linux
- Drivers may be preloaded or available from HP desktop PC support Web site: www.hp.com/go/vectrasupport

recommended resolution

- 32-bit: 1024 x 768 at 85 Hz

minimum resolution

- 8-bit: 640 x 480 at 60 Hz

maximum resolution

- 32-bit: 1280 x 1024 at 85 Hz

ATI RAGE 128 Ultra graphics

video graphics

Mainstream 2D/3D graphics performance

- Powered by ATI RAGE 128 Ultra chip
- Full AGP 2X/AGP 4X support (up to 1 GB/s bandwidth)
- 128-bit 2D engine
- Floating-point 3D setup engine with complete 3D primitive support
- High-quality DVD/MPEG-2 playback with iDCT and motion compensation support
- DirectX 8 and OpenGL hardware acceleration
- Integrated triple 8-bit palette 250 MHz RAMDAC with video gamma adjustment
- DDC2B support for Plug-&Play detection of monitor
- 16/10 monitor support
- Support for 32-bit true color (16.7 million colors) at resolutions up to 1920 x 1440
- Twin-cache architecture to maximize texture and pixel throughput

graphics memory

- 32 MB SDRAM (not upgradable)

available graphics drivers

- HP-tested Microsoft Windows XP Professional
 - HP-tested Microsoft Windows XP Home Edition
 - HP-tested Microsoft Windows 2000 Professional
 - HP-tested Microsoft Windows NT Workstation 4.0
 - HP-tested Microsoft Windows 98 Second Edition
 - HP-tested Linux
- Drivers may be preloaded or available from HP desktop PC support Web site: www.hp.com/go/vectrasupport

recommended resolution

- 32-bit: 1280 x 1024 at 85 Hz

minimum resolution

- 8-bit: 640 x 480 at 60 Hz

maximum resolution

- 32-bit: 1920 x 1200 at 85 Hz

software

operating system

- **HP supported operating systems:**

Microsoft Windows XP Professional, Microsoft Windows XP Home Edition, Microsoft Windows 2000 Professional, Microsoft Windows NT Workstation 4.0, Microsoft Windows 98 Second Edition

- **Other certified operating systems:**

Linux distributions certified via Linuxcare: Mandrake, Red Hat, SuSE, Turboworkstation

- More information about the Linux operating system is available on the HP desktop PC Web site:

www.hp.com/desktops/linux

* Note: This software is shipped in the box. Its availability may vary by country.

pre-installed software

- **Operating system:**

- Microsoft Windows XP Professional* (includes Microsoft Windows 2000 Professional downgrade on CD-ROM "in the box")

- Microsoft Windows XP Home Edition

- Microsoft Windows 2000 Professional** (including Windows NT Workstation 4.0 downgrade on CD-ROM "in the box"), or

- Microsoft Windows 98 Second Edition, depending on model

- **Applications:**

- Microsoft Office XP SBE (availability may vary per country)

- Microsoft Office XP Pro (availability may vary per country). Certain Microsoft product(s) included with this computer may use technological measures for copy protection. In such an event, you will not be able to use the product if you do not fully comply with the product activation procedures. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply)

- WinDVD, MPEG-2 decoding software from InterVideo included on DVD models

- RecordNow CD media recording software and DLA CD media "recordlike floppy" software, both from VERITAS, are included on CD-RW models

- **On CD-ROM media in the box (not preinstalled)**

- HP Tootools agent

- HP e-Diagtools hardware diagnostic solution

- HP Instant Support tuner

- Every unit includes in the box:

- HP image creation and recovery CD-ROM (OS installation and hard disk preparation) (OS installation and hard disk preparation) This CD-ROM allows you to: reload the operating system, configure the hard disk drive (FAT 16, FAT 32, or NTFS), create HP utility partition for HP e-Diagtools

- HP image library and diagnostics CD-ROM (drivers and utilities installation and diagnostics)

- HP Tootools device manager available at: www.hp.com/go/tootools

* Note: For Microsoft Windows XP Professional preloaded models: the end user may downgrade with right to re-upgrade to/from any of the following operating systems: Microsoft Windows 2000 or Microsoft Windows 2000 Professional or Microsoft Windows NT Workstation 4.0, or Microsoft Windows 98 Second Edition.

** Note: For Microsoft Windows 2000 preloaded models, the end user must make a one-time selection between Microsoft Windows 2000 or downgrade to Microsoft Windows NT Workstation 4.0.

software available from the Web

- HP Tootools device manager available at www.hp.com/tootools

- HP LAN card ready drivers available from HP desktop PC support Web site: www.hp.com/go/vectrasupport

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hp vectra v420



innovative

communication features

Ethernet LAN interface	<ul style="list-style-type: none">• Intel Pro/100 VE Network connection• 10Base-T and 100Base-TX physical layer capabilities• Remote Power On, Remote Power Off, remote wake-up multiprotocol firmware to enable pre-boot capabilities in a networked environment: included in the BIOS, enables remote automated installation and pre-OS desktop management, supports PXE 2.1 and RPL 2.73 protocols, compliant with today's industry standards: Wired for Management (WfM) 2.0, PCI 2.2
modem	<ul style="list-style-type: none">• USB external modem (availability varies by country)• PCI modem (U.S. only)
available LAN drivers	<ul style="list-style-type: none">• Microsoft Windows XP Professional, Microsoft Windows XP Home Edition, Microsoft Windows 2000 Professional, Microsoft Windows NT Workstation 4.0, Microsoft Windows 98 Second Edition• Latest LAN information and drivers available from HP desktop PC support Web site www.hp.com/go/vectrasupport
LAN card ready program	<ul style="list-style-type: none">• Tested with leading Ethernet and Token Ring adapters• Detailed setup instructions and HP-tested drivers for a wide range of LAN cards available on the Web at: www.hp.com/go/vectrasupport (select LAN card ready)
network client certification	<ul style="list-style-type: none">• Novell Client certification for Microsoft Windows 2000 Professional and Microsoft Windows NT Workstation 4.0• Novell Client certification for Microsoft Windows 95/98 <p>HP PCs use genuine Windows® Operating Systems www.microsoft.com/piracy/howtotell</p>

ergonomics

ergonomic and environmental design

- Video modes supporting non-interlaced resolutions up to 1920 x 1440 at ergonomic refresh rates up to 85 Hz
- EPA ENERGY STAR® and Blue Angel certified*
- TÜV-GS Mark
- Energy-saving variable-speed fan for temperature control
- Large selection of MPRII- and EPA ENERGY STAR-certified displays
- CFC-free manufacturing process; single plastic for easy recycling
- HP energy saver
- Less than 5W power consumption in standby mode, called suspend to RAM S3, for Microsoft operating systems: Microsoft Windows XP Professional, Microsoft Windows XP Home Edition, Microsoft Windows 2000, Microsoft Windows NT Workstation 4.0, and Microsoft Windows 98
- Optimized desk-space-saving desktop package
- Control panel keeps user aware of PC status:
 - On/Off switch integrated in the surface to avoid accidental power-off
 - On/Off green LED (blinks in sleep mode)
 - Hard disk drive activity LED

* Note: As an ENERGY STAR partner, HP has determined that this product meets the ENERGY STAR guidelines for energy efficiency (on appropriate models).

The environmental profile of the product is available at www.hp.com/hpinfo/community/environment/desktop.htm

regulatory compliance and approvals

safety approvals

- IEC 60950: 1991 +A1 +A2 +A3 +A4
- 73/23/EEC Low Voltage Directive amended by Directive 93/68/EEC
- EN 60950: 1992 +A1 +A2 +A3 +A4 +A11
- CSA C22.2 No. 950-M89
- UL 1950 listed
- NOM-019-SCFI-1994
- GB4943-1995
- TÜV-GS Mark
- PSB

electromagnetic compatibility

- FCC Part 15 Class B
- ICES-003 Class B
- European EMC Directive 89/336/EEC amended by Directive 93/68/EEC
- VCCI Class B
- RRL Class B
- AS/NZS3548 Class B
- BSMI CNS13438 Class B
- CISPR 22: 1997/EN 55022: 1998
- CISPR 24: 1997/EN 55024: 1998
- GB9254-1998
- IEC/EN 61000-3-2: 1995 + A14
- IEC/EN 61000-3-3: 1995

hp value-added software

stable & easy to deploy

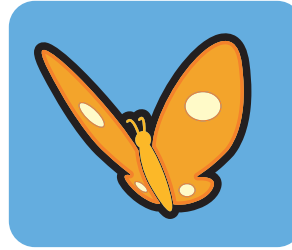
Adapt your standard software image more quickly and less frequently on HP professional line PCs.

image creation and recovery CD-ROM	<ul style="list-style-type: none">• HP professional line PCs come with an image creation and recovery CD-ROM in the box. This CD-ROM allows you to recover your pre-installed software:<ul style="list-style-type: none">– Reload the operating system or change your operating system (from Microsoft Windows XP to Microsoft Windows 2000)– Configure the hard disk drive partitions (FAT 16, FAT 32, or NTFS)– Create HP utility partition for HP e-Diagtools re-installation
image library and diagnostics CD-ROM	<ul style="list-style-type: none">• HP professional line PCs come with an image library and diagnostics CD-ROM in the box. The HP Vectra vL420 can be booted from this CD-ROM in order to run HP e-Diagtools hardware system diagnostics.• The image library and diagnostics CD-ROM also contains HP drivers and system software pre-packaged for unattended installation. These packages can be used locally after an operating system installation (e.g., using the image creation and recovery CD-ROM) or distributed with Microsoft scripting tools.<ul style="list-style-type: none">– To get a complete overview on how to use these CD-ROMs to install/re-install your software, go to: www.support.vectra.hp.com/vectrasupport/level4/38vfa182en/38vfa182en.html– For package updates and additional pre-packaged drivers for distribution with Microsoft SMS, go to: www.hp.com/go/vectrasupport and select “HP Image Library” in the “all-models library” section
long lifecycle	<ul style="list-style-type: none">• 9 months minimum but often more than 12 months.
image stability	<ul style="list-style-type: none">• Program tightly controls the PC hardware revisions, enabling you to create a single software image for easy deployment across all your new HP professional line PCs.
qualify one, deploy many	<ul style="list-style-type: none">• The same software image can be deployed on all form factors of the HP Vectra vL420: desktop, minitower, and small form factor.
proactive notification	<ul style="list-style-type: none">• Informs you of the changes by e-mail, letting you decide whether to upgrade your PCs.
customer image testing service	<ul style="list-style-type: none">• HP offers a fee-based customer image testing service. The service provides consulting on image build and full image analysis prior to PC deployment. The qualified image is thereafter tested at each hardware roll, providing the customer with customized notification and, if necessary, image patching. <p>More details on HP software stability can be obtained at: www.hp.com/desktops/vectra/stability/ For more information on the customer image testing service, please ask your local HP representative.</p>
Rembo Auto Deploy (software image deployment solution)	<ul style="list-style-type: none">• To easily deploy hundreds of HP professional line PCs and laptops simultaneously, HP recommends Rembo Auto Deploy (www.rembo.com). Rembo Auto Deploy is an innovative software deployment solution based on the PXE remote boot industry standard.• It offers fully automated hard disk software image installation, with the unique capability to dynamically choose the operating system, the business applications, and the end-user data parameters you want to use. HP professional line PCs and laptops installed by Rembo Auto Deploy also benefit from a customized recovery CD-ROM that mirrors their deployed hard disk software image. If your software setup is still manual, too slow, and lacking flexibility, Rembo Auto Deploy is your solution of choice.• HP uniquely provides “HP rapid deployment solution” services based on Rembo Auto Deploy to help you re-engineer your IT process of staging new PCs (HP consulting services) or update your existing installed based of PCs (HP outsourcing selective services).• HP currently uses Rembo Auto Deploy to deploy the hard disk software images of its PCs worldwide and builds its service proficiency on its own IT experience. Rembo Auto Deploy can also be licensed directly from www.rembo.com. Check out what we have done for others and what we could do for you with Rembo Auto Deploy at: www.hp.com/hpinfo/newsroom/feature_stories/easyeverything.htm
Rembo Auto Backup	<ul style="list-style-type: none">• To instantly back up and restore your HP professional line PC and laptop software, HP recommends Rembo Auto Backup (www.rembo.com). Rembo Auto Backup is a new, innovative, and smart software backup and recovery solution, run locally from a client PC hard disk. Backup operation of PCs can be managed remotely and securely, with incremental backup points and IT control over end-user usage. With Rembo Auto Backup, the complete process of backing up and restoring does not require any manual intervention.• HP uniquely provides services based on Rembo Auto Backup to help you re-engineer your IT process of supporting and operating new or existing PCs (those services are part of “HP rapid deployment solution”—see above). HP is currently providing the Rembo Auto Backup solution to its 86,000 worldwide employees to use as their standard software recovery method, and builds its service proficiency on its own IT experience. Rembo Auto Backup can also be licensed directly from www.rembo.com. Check out what we have done for others and what we could do for you with Rembo Auto Backup at: www.hp.com/hpinfo/newsroom/feature_stories/easyeverything.htm
PC personality migration solution*	<ul style="list-style-type: none">• HP provides services to help customers migrate user data and settings from their current PC to the new PC. At the heart of it is a powerful industry-standard tool that allows a quick and effective migration leading to a faster deployment, productivity enhancements, and end-user satisfaction. It is possible to migrate settings across two Microsoft operating systems and even across two versions of Microsoft Office. All major standard applications are supported, while custom development is used to port customer internal applications. For more details please ask your HP representative.

* Note: U.S. only

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hp vectra v420



simple

hp value-added software

easy to manage

HP professional line PCs with HP Tootools provide the inventory information you need and the most efficient way to decrease desktide visits.

inventory management

Remote and central inventory

- Auto-discovery of devices
- Automated collection of inventory
- PC search and selection
- Standard reports (including asset location, configuration)
- Report of Microsoft Windows 2000 Professional and Microsoft Windows XP ready PCs (this report includes PCs that match the minimum hardware requirements and are certified)
- Access to detailed configuration information
- Customizable asset string
- Support for larger environments (up to 35,000 nodes per device manager server)

configuration management

Remote boot control

- Scheduled system reboot
- Scheduled system power-off
- Scheduled system power-on

Remote and central system software updates

- HP Tootools agent deployment and update (agent deployment is only available with Microsoft Windows NT Workstation 4.0, Microsoft Windows 2000 Professional, or Microsoft Windows XP within the same Microsoft Windows NT domain)
- BIOS update
- Drivers update (video, hard disk drive, and LAN card)
- Drivers, BIOS and utilities revision management
- Selected HP LaserJet printers installation
- Hardware diagnostics deployment and update (HP e-Diagtools)

File importing/password administration

- Third-party trap import/configuration
- IP/MAC address file importing
- Enhanced HP Tootools user password administration

compliance with industry standards

Desktop Management Interface (DMI)

- Provided with Tootools agent for Microsoft Windows 9x and Microsoft Windows NT Workstation 4.0 models. HP professional line PCs have the most comprehensive DMI implementation in the industry:
 - DMI 2.0s compliant
 - HP DMI instrumentation for PC system information, monitor, LAN cards, security, devices, drivers, BIOS, end-user information, and more
 - Support for all DMI management applications, including Intel LANDesk, McAfee ZAC, and more
- HP Tootools can uniquely:
 - Power-on DMI on HP professional line PCs and non-HP PCs
 - Read DMI information from HP professional line PCs and non-HP PCs
 - Report DMI alerts from HP professional line PCs and non-HP PCs

Windows Management Interface (WMI)

- Provided with Tootools agent for Microsoft Windows 2000 and Microsoft Windows XP models. HP professional line PCs have the industry-leading WMI implementation:
 - Full WMI instrumentation
 - Common Tootools agent and WMI instrumentation across Vectra, Omnibook, and e-pc
- First to implement WMI instrumentation for Intel IPsec LAN card adapters, HP Tootools can uniquely:
 - Power-on WMI on HP professional line PCs and non-HP PCs
 - Read WMI information from HP professional line PCs and non-HP PCs

Wired for Management (WfM)

- HP professional line PCs are WfM 2.0 ready:
 - Provide easy remote power-on (RPO/Power on LAN), remote power-off, and remote reboot.
- HP professional line PCs are PXE 2.0 ready:
 - Provide easy Microsoft Windows 2000 Workstation software deployment with Microsoft Windows 2000 remote installation service

Section 508/Accessibility

- HP Tootools WMI agent is compatible with Microsoft Windows 2000 Narrator software

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easy to manage (continued)

performance management/alerts

- Resource bottleneck analysis
- System Performance Advisor
- CPU, memory, and disk I/O performance monitoring and trend analysis for Microsoft Windows NT Workstation 4.0, Microsoft Windows 2000, and Microsoft Windows 98 Second Edition systems
- PC remote control (Symantec pcAnywhere trial version)
- Custom reports and tables
- Enhanced notification actions and action triggers
- Most frequent alerts report
- Enhanced action-on-alerts via e-mail and paging (paging available in U.S.)
- Integration with Instant Support to provide class issues alert and report

hp toptools bridges

- The HP Toptools bridges enable full integration with complementary applications. Bridges are available with the following applications:
 - HP OpenView NNM (Microsoft Windows NT Workstation 4.0)
 - HP OpenView NNM (HP-UX)
 - HP OpenView NNM (Solaris)
 - Microsoft SMS 2.0/2.01
 - IBM Tivoli NetView (Microsoft Windows NT Workstation 4.0)
 - IBM Tivoli Enterprise Management (Microsoft Windows NT Workstation 4.0, HP-UX, Solaris)
 - Computer Associates Unicenter TNG (Microsoft Windows NT Workstation 4.0)
- For more information about HP Toptools value pack and HP Toptools bridges, go to: www.hp.com/go/toptools

More details on HP professional line PCs' manageability and HP Toptools can be obtained at:
www.hp.com/go/pcmanageability

HP PCs use genuine Windows® Operating Systems
www.microsoft.com/piracy/howtotell

hp value-added software

easy to support

HP professional PCs are easy to diagnose, troubleshoot, and service, greatly empowering your help desk resources and providing a better user experience.

fault management	Fault diagnostics <ul style="list-style-type: none">• HP e-Diagtools (local and remote)• On-line video and LAN cards (3Com, Intel, Matrox) Remote and local alert reporting <ul style="list-style-type: none">• Power-on self-test (POST)• Chassis intrusion detection• IDE hard disk drive SMART failure warning Resources monitoring <ul style="list-style-type: none">• CPU• Memory• Hard disk drives• Networking card (requires SNMP services to be installed)
e-diagnostics	HP e-Diagtools hardware diagnostics solution <ul style="list-style-type: none">• Provides preboot diagnostics, system configuration diagnostics, and a complete test suite of the system hardware components• Any error found by e-Diagtools can be transformed into a sound signal emitted by the pre-boot diagnostic chip and sent over a phone line to your HP support provider for immediate troubleshooting• Immediate troubleshooting of e-Diagtools error codes can also be accessed manually or automatically (through HP virtual call assistant) from www.hp.com/desktops/diagtools• Test results and system configuration are stored in a support ticket file for further access from your HP support provider, if necessary• e-Diagtools allows the user to e-mail the support ticket to an HP support provider (in cases where the user's PC can access the Web)• e-Diagtools can be remotely launched by HP Tootools device management software (requires HP Tootools agent on your system) or HP Instant Support web portal, or upon HP support specialist request• e-Diagtools allows the user to update the system BIOS via their Internet connection (in cases where the user's PC can access the Web)
ease of setup and servicing	Highly serviceable packages—easy to open, repair, and expand, with built-in intuitiveness <ul style="list-style-type: none">• Features include:<ul style="list-style-type: none">– Cover-tool-free, intuitive removal– System board-direct access to upgradable parts (memory, microprocessor, I/O cards)– Hard disk drive-easy removal, direct access, tool-free removal of hard disk drive cage– Front-accessible drives-direct access, easy removal of tray– Embedded repair instruction labels– Easy upgrade of I/O cards-tool-free single I/O locker– No mounting accessories needed when installing accessory devices– Color-coded connectors for simplified PC assembly• Hassle-free security with HP master pass key system-chassis lock with configurable master setting (optional)• BIOS stored in flash EEPROM for fast and easy upgrades• Setup program in flash ROM• Automatic detection of major components at power-on• Power-on self-test (POST) displays start up errors, suggests solutions• All models are local area network (LAN) ready for easy integration into the network• HP e-Diagtools: fast, easy-to-use hardware diagnostics for quick system troubleshooting• LAN hardware diagnostics
instant support	HP instant support automates and speeds up the resolution of computing problems, freeing you from time-consuming diagnostic chores and allowing you to focus on more important business activities. Featuring Web-based diagnosis, resolution capabilities, and communication with HP support providers via active messaging, HP instant support can be personalized to meet your business needs and deliver the support experience that works for you. For more information, go to: www.hp.com/go/instant-support More details on HP professional line PCs supportability can be obtained at: www.hp.com/go/pcsupportability

hp vectra v420



expandable

hp value-added software

security ready

HP professional line PCs reduce security risks.

physical security

- Boot Block BIOS Flash hardware protected
- HP physical security to protect PCs from theft:
 - Optional HP master pass key lock (lock must be purchased separately)
 - Kensington lock provision
 - Two BIOS-level passwords
 - Chassis intrusion detection

security management

Remote and central system boot configuration

- Enable/Disable start from hard disk
- Enable/Disable start from floppy disk
- Enable/Disable start from CD-ROM drive
- Enable/Disable start from network drive
- Enable/Disable Remote Power On
- Enable/Disable start from USB device

Remote and central security configuration

- Enable/Disable floppy disk drive
- Enable/Disable writing on floppy disk drive
- Enable/Disable hard disk, CD-ROM, and CD-RW access
- Enable/Disable serial and parallel ports
- Enable/Disable USB ports

Remote and central security control

- Complete system lock
- System protection (power-on and reset buttons)

Remote and central security management

- System administrator and user password change
- Enable/Disable user password on power-on
- System SNMP community password change
- Report of PCs not password-protected

More details on HP professional line PCs security can be obtained at: www.hp.com/go/pcsecurity



Whatever your business need, HP has the monitor for you. Optimized for your HP professional line PCs, HP monitors deliver the performance you need, the quality you expect, at the right price.

www.hp.com/go/monitors

For the latest information on professional line PCs, visit HP's Web site at:

www.hp.com/go/desktops



for more product information: visit www.hp.com/go/desktops

purchase: HP business solutions, products, and supplies can be purchased at your local HP partner (www.hp.com/go/locator), or bought directly from HP at www.buy.hp.com, or 800-613-2222.

finance: HP finance plans provide all the benefits of new technology without the risk or cost of ownership. For details, call toll-free 888-999-HPTF (4783).

accessibility: HP is committed to providing products and services that are accessible to people with disabilities. For more information, please visit www.hp.com/accessibility or call 888-259-5707.

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All certifications may not be completed at product introduction. Please check with your HP reseller for certification status.

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04/02

5980-7595ENUC Rev. 2