

HP workstation accessories brochure 2009



Options and high-performance
displays for your HP workstations

**SPEED, EFFICIENCY AND
POWERFUL PERFORMANCE**



Add these accessories to your HP workstation for a more robust and productive computing experience.

HP workstation accessories provide:

- Improved performance
- Expanded functionality
- Expected reliability
- Innovative technology
- Award-winning customer service
- Great features at an affordable price

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Recommended options for your HP workstations



HP recommends Windows Vista® Business.

What type of power user are you? HP makes it easy by recommending what options work best for your needs.

User type	Typical models	Recommended options
Power professional	Z400 xw4600	<p>Performance:</p> <ul style="list-style-type: none"> HP Memory—Minimum 2 GB is recommended to meet future applications and OS upgrade needs. <p>Advanced viewing:</p> <ul style="list-style-type: none"> HP Performance series display—Recommended LP2275w or LP2475w 3D graphics cards—Maximum performance for 3D applications <p>Storage and input:</p> <ul style="list-style-type: none"> Additional hard drives—To increase speed, storage capacity and for data backup
Engineering design	Z400 Z600 Z800 xw4600 xw6600 xw8600 xw9400	<p>Advanced input:</p> <ul style="list-style-type: none"> HP SpacePilot USB 3D Intelligent Controller—30 percent increase in productivity and up to a 50 percent reduction in repetitive mouse movements. Manipulate the 3D model, while using the mouse to select, create, edit and annotate. <p>Performance:</p> <ul style="list-style-type: none"> HP Memory—Minimum 3 GB for 32-bit OS or 8 GB¹¹ for 64-bit OS Second hard drive—Upgrade to meet storage and backup capacity for RAID. Second processor—For up to four cores of processing power for rendering (excluding xw4600 and Z400) <p>Advanced viewing:</p> <ul style="list-style-type: none"> HP Performance series monitors—Minimum LP2465, recommend a 30-inch LP3065. HP Performance series monitors—Recommend 30-inch diagonal. Suggest multiple monitor setup for improved productivity. (Dual-link DVI required for 30-inch diagonal LCD.) 3D graphics cards—Maximum performance for 3D applications by using the graphics card for optimized video acceleration instead of the CPU. Support larger and multiple displays. Graphics card upgrade required for 30-inch diagonal displays.
Digital media and entertainment	Z400 Z600 Z800 xw4600 xw6600 xw8600 xw9400	<p>Advanced input:</p> <ul style="list-style-type: none"> HP SpacePilot USB 3D Intelligent Controller <p>Performance:</p> <ul style="list-style-type: none"> HP Memory—four GB¹² is recommended for 32-bit OS or eight GB¹¹ for 64-bit OS. Second processor—For up to four cores of processing power for rendering (excluding 4600 and Z400) Multiple hard drives and RAID configuration—Additional drives are ideal for video editing work. HP offers up to 1 TB¹³ of storage, which is especially critical for videographers. Sound Blaster X-Fi Audio Card (excluding mobile workstations) and speakers <p>Advanced viewing:</p> <ul style="list-style-type: none"> 3D graphics cards—Maximum performance for 3D applications and multiple displays. Minimum LP2475w. Recommend HP DreamColor LP2480zx Professional LCD display—delivers billion-color accuracy with the world's only color-critical 24-inch diagonal widescreen LCD display based on the HP DreamColor technology—a must for high definition animating.
Oil and gas	Z800 xw8600 xw9400	<p>Performance and viewing:</p> <ul style="list-style-type: none"> HP Memory—Minimum 32 and 64 GB recommended. High-end graphics cards—Upgrade to latest NVIDIA graphics needed for application requirements and to support larger and/or multiple displays. Graphics card upgrade is required for 30-inch diagonal displays. Up to two quad-core Intel® Xeon® processors¹⁴—Provide engineers with quicker time to insight, understanding and freedom to pursue more design alternatives by providing them more performance and throughput in their personal computing resource. HP Performance series monitors—Recommend LP3065. This market requires the largest screens and highest resolution possible. The 30-inch diagonal includes a wider color gamut improving color reproduction. (Dual-link DVI required for 30-inch diagonal LCD.) <p>Storage and input:</p> <ul style="list-style-type: none"> Additional hard drives—To increase speed, storage capacity and for backup via RAID
Financial services	Z400 Z600 Z800 xw6600 xw4600 xw9400	<p>Enhanced display performance:</p> <ul style="list-style-type: none"> Four displays—For a typical financial trader configuration HP LP2275w Flat Panel Display—A popular monitor for this segment due to thin bezels for better tilting

Memory

As the files and documents we work with grow in size and become more robust, so do the demands of the computers and applications we use them on. Additional memory is recommended when working with large files and robust applications to maintain the performance and reliability you demand from your workstation.

Did you know?

The HP Z800 workstation has up to 12 DIMM slots and is expandable up to 192 GB of memory! Check out the expandability on all HP workstations by visiting www.hp.com/workstations.

Why buy memory?

Adding additional memory allows for:

- Increased system performance

- Faster startup and fewer delays during routine operations
- Easy toggling between several open applications
- Reduced system downtime, data loss and financial impact of memory failure
- Ability to handle increasingly demanding applications without degrading performance

Why buy HP memory?

- Non-HP memory may perform less effectively or may even fail when exposed to the demands of a high-end workstation motherboard.
- HP memory is thoroughly tested on HP products to provide high reliability and to decrease the risk of downtime and enable more efficient performance.
- HP assumes the remaining warranty term of the workstation's standard three-year limited warranty.



Description	Part number	Smart Buy P/N	HP Workstation xw4600	HP Workstation xw6600	HP Workstation xw8600	HP Workstation xw9400	HP Workstation Z400	HP Workstation Z600	HP Workstation Z800
HP 1 GB (1x1 GB) DDR3-1333 ECC RAM	FX698AA	FX698UT					•	•	•
HP 2 GB (1x2 GB) DDR3-1333 ECC RAM	FX699AA	FX699UT					•	•	•
HP 4 GB (1x4 GB) DDR3-1333 ECC RAM	NL797AA						•	•	•
HP 4 GB (1x4 GB) DDR3-1333 ECC Reg RAM	FX621AA	FX621UT							•
HP 8 GB (1x8 GB) DDR3-1333 ECC Reg RAM	FX622AA								•
HP 512 MB (1x512 MB) DDR2-667 ECC RAM	PV940A	PV940UT	•						
HP 512 MB (1x512 MB) DDR2-667 ECC Registered RAM	EV281AA					•			
HP 1 GB (1x1 GB) DDR2-667 ECC Registered RAM	EV282AA	EV282UT				•			
HP 1 GB (1x1 GB) DDR2-667 ECC RAM	PV941A	PV941UT		•	•				
HP 2 GB (1x2 GB) DDR2-667 ECC Registered RAM	EV283AA	EV283UT		•	•				
HP 4 GB ⁵ (1x4 GB) DDR2-667 ECC Registered RAM	GY414AA			•	•				
HP 512 MB (1x512 MB) DDR2-667 ECC FBD RAM	EM159AA	EM159UT		•	•				
HP 1 GB (1x1 GB) DDR2-667 ECC FBD RAM	EM160AA	EM160UT		•	•				
HP 2 GB (1x2 GB) DDR2-667 ECC FBD RAM	EM161AA	EM161UT		•	•				
HP 4 GB ⁵ (1x4 GB) DDR2-667 ECC FBD RAM	EM162AA	EM162UT		•	•				
HP 8 GB ⁵ (1x8 GB) DDR2-667 ECC FBD RAM	GM112AA				•				
HP 512 MB (1x512 MB) DDR2-800 ECC RAM	GH738AA	GH738UT	•						
HP 1 GB (1x1 GB) DDR2-800 ECC RAM	GH739AA	GH739UT	•						
HP 2 GB (1x2 GB) DDR2-800 ECC RAM	GH740AA	GH740UT	•						
HP 1 GB (1x1 GB) DDR2-800 ECC FBD RAM	KY112AA	KY112UT			•				
HP 2 GB (1x2 GB) DDR2-800 ECC FBD RAM	KY113AA	KY113UT			•				
HP 4 GB ⁵ (1x4 GB) DDR2-800 ECC FBD RAM	FS376AA				•				
HP 8 GB ⁵ (1x8 GB) DDR2-533 ECC Registered RAM	GT808AA					•			

Graphics



Why buy professional graphics?

The multiple monitors and fast graphical processing options that are available today demand high-end graphics cards to fine-tune the functionality improvements of the applications we use. Adding professional graphics allows you to increase productivity with multiple display support and increase performance in 2D or 3D applications with more memory and processing power on the graphics card.

Professional graphics are ideal for those workstation users who need professional 2D or advanced 3D graphics performance and greater productivity through multi-tasking across several monitors.

Why buy HP graphics?

HP workstation graphics cards are certified by major independent software vendors and can offer excellent solutions for your graphics needs.

- Dedicated workstation support, by both HP and graphics vendors
- Long lifecycles enable enterprises to develop stable images and support consistent deployments over longer periods, thus lowering total cost of ownership.
- Certified by software providers to run with their applications
 - Added stability, reliability and support
 - Specific application productivity tools and drivers to accelerate performance
- HP-tested unified graphics driver
 - Enables compatibility between workstation, graphics, OS and applications
 - Bugs caught before they show up in user environments with thorough test suite
 - Tested both on Windows® and Linux



Description	Part number	Smart Buy P/N	HP Workstation xw4600	HP Workstation xw6600	HP Workstation xw8600	HP Workstation xw9400	HP Workstation Z400	HP Workstation Z600	HP Workstation Z800
ATI FireGL™ V5600 512 MB PCIe 3D Graphics	GT346AA	GT346UT	•	•	•				
ATI FireGL V7700 512 MB PCIe 3D Graphics	KT979AA	KT979UT	•	•	•				
ATI FirePro V3700 256 MB 3D Graphics	FY944AA	FY944UT	•				•	•	•
ATI FirePro V5700 512 MB 3D Graphics	FY947AA	FY947UT	•				•	•	•
ATI FirePro V7750 1 GB 3D Graphics	FY948AA	FY948UT	•				•	•	•
NVIDIA Quadro NVS 290 256 MB PCIe 2D Graphics	GN502AA	GN502UT	•	•	•		•	•	•
NVIDIA Quadro NVS 295 256 MB 2D Graphics	FY943AA	FY943UT	•				•	•	•
NVIDIA Quadro NVS 450 512 MB PCIe 2D Graphics	FH519AA	FH519UT	•	•	•	•	•	•	•
NVIDIA Quadro FX370 256 MB PCIe 3D Graphics	GP528AA	GP528UT	•	•	•	•			
NVIDIA Quadro FX380 256 MB 3D Graphics	NB769AA	NB769UT	•				•	•	•
NVIDIA Quadro FX570 256 MB PCIe 3D Graphics	GR521AA	GR521UT	•	•	•	•			
NVIDIA Quadro FX580 512 MB 3D Graphics	FY945AA	FY945UT	•				•	•	•
NVIDIA Quadro FX1700 512 MB PCIe 3D Graphics	GP529AA	GP529UT	•	•	•	•			
NVIDIA Quadro FX1800 768 MB 3D Graphics	FY946AA	FY946UT	•				•	•	•
NVIDIA Quadro FX3700 512 MB 3D Graphics	KD506AA	KD506UT	•	•	•	•			
NVIDIA Quadro FX3800 1 GB PCIe 3D Graphics	FY949AA	FY949UT	•				•	•	•
NVIDIA Quadro FX4800 1.5 GB PCIe 3D Graphics	FQ138AA	FQ138UT	•	•	•	•	•	•	•
NVIDIA Quadro FX5600 1.5 GB PCIe 3D Graphics	GU095AA	GU095UT				•			
NVIDIA Quadro FX5800 4 GB PCIe 3D Graphics	FZ559AA	FZ559UT				•	•		•
NVIDIA HD component breakout cable	GU096AA		•	•	•				
NVIDIA SLI Graphics Connector	PP654AA					•			•
HP DMS-59 to Dual DVI Cable for NVS and T2	DL139A		•	•			•	•	•
HP DMS-59 to Dual VGA Cable Kit	GS567AA		•	•	•				
HP DisplayPort to Dual Link DVI Adapter	NR078AA						•	•	•
HP DisplayPort To VGA Adapter	AS615AA		•	•	•		•	•	•
HP DisplayPort To DVI-D Adapter	FH973AA						•	•	•

Learn more about HP Leadership graphics by visiting www.hp.com/go/leadershipgraphics. For more information, contact your local HP reseller, visit www.hp.com/go/wsaccessories or call 1-800-888-9909.

Graphics: AMD



The new ATI FirePro™ accelerators from AMD

The new ATI FirePro™ 3D graphic accelerators deliver superior application performance for your Engineering, Digital Content Creation, or Scientific modeling needs. ATI FirePro 3D graphic accelerators are highly reliable and loaded with visionary innovations that give you extreme productivity—so you can focus on creating, not waiting.

ATI FirePro 3D graphic accelerators have been tuned to deliver optimal performance with the applications you use every day. Whether you're designing a new car, developing a hot new game, creating an animation masterpiece or performing graphics-intensive scientific projects, we've got you covered. With ATI FirePro 3D graphic accelerators, you can do more than accelerate your graphics—you can accelerate your creativity.

Thanks to certified compatibility with key applications and compliance with the most important standards, ATI FirePro 3D graphic accelerators can offer extreme productivity and reliability.

Maximizing real-time application interactivity

The unique ultra-parallel processing architecture of AMD workstation graphics accelerators maximizes throughput by automatically directing graphics horsepower where it's needed.

Seeing more and doing more with your data

ATI FirePro 3D graphics feature full 30-bit display pipeline and support for High Dynamic Range output, producing over one billion colors for the most vibrant visual fidelity¹ versus more traditional 24-bit display pipeline, which produces only 16.7 million colors.

Interacting with huge datasets

ATI FirePro 3D graphics provide the capability to store geometry inside the card without

having it pushed back to the CPU to calculate changes. Additionally, ATI FirePro 3D graphics products incorporate unique AutoDetect technology. As users open 3D applications or move between them, optimized ATI FirePro 3D graphics driver settings are automatically configured for maximum performance under a multitude of workflow demands.

Delivering world-class performance, reliability and support

ATI FirePro 3D workstation graphics accelerators are currently pending with major Computer Aided Design (CAD) and Digital Content Creation (DCC) applications. ATI FirePro 3D unified drivers simplify installation, deployment and maintenance. AMD offers direct customer access to a dedicated professional class technical support team.

Key features and benefits

- DisplayPort output for superior 30-bit image quality^{1,2}
- Scalable ultra-parallel processing architecture with up to 800 unified shaders
- AutoDetect instinctively optimizes performance for multi-application workflow
- Dual Link DVI output for driving ultra high resolution widescreen monitors
- High Dynamic Range (HDR) rendering with 8-bit, 10-bit, and 16-bit per RGB color component support
- Hardware acceleration of DirectX® 10.1 and OpenGL® 3.2 advanced features
- Optimized and certified for many CAD and DCC applications
- PCI Express® 2.0 compliant

Availability

ATI FirePro family of professional graphics solutions are available in all Z series workstations and the xw4600. The ATI FireGL family of graphics is available on xw4600, xw6600 and xw8600.



ATI FirePro V3700



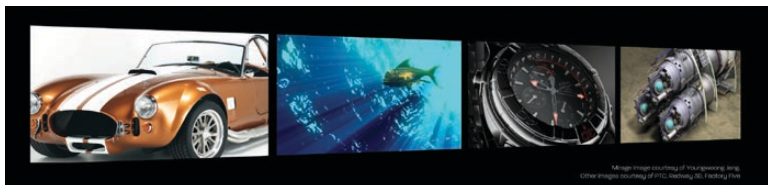
ATI FirePro V5700



ATI FirePro V7750

1. 30-bit monitor required for full 30-bit display (10-bit per RGB component). ATI FirePro 3D graphics can display over one billion colors when attached to 30-bit displays.

2. DisplayPort output is not available on ATI FirePro V3700.



To learn more, visit www.hp.com/go/ATI.

For more information, contact your local HP reseller, visit www.hp.com/go/wsaccessories or call 1-800-888-9909.

Graphics: NVIDIA



NVIDIA Quadro
FX 380



NVIDIA Quadro FX 580



NVIDIA Quadro
FX 1800



NVIDIA Quadro
FX 3800



NVIDIA Quadro
FX 4800



NVIDIA Quadro
FX 5800

The NVIDIA® Quadro® family of professional solutions takes the leading professional applications to a new level of interactivity by enabling unprecedented capabilities. The industry's leading workstation applications leverage these solutions to enable hardware-accelerated features not found in any other professional graphics solution.

The performance and power of the NVIDIA Quadro architecture are built on a solid foundation of quality engineering. This engineering excellence is exemplified by the NVIDIA Unified Driver Architecture (UDA), which is certified for quality by the entire spectrum of CAD, DCC and visualization applications.

The Quadro product line delivers the enhanced productivity you need at every price point, from the Quadro FX 5800 at the ultra-high-end; Quadro FX 4800 and 3800 at the high-end; Quadro FX 1800 at the mid-range, to Quadro FX 580 and 380 at the entry-level. The Quadro NVS 450 and 295 delivers performance on 2-D and multi-display applications.

Key features

NVIDIA unified architecture

Industry's first unified architecture designed to dynamically allocate geometry, shading, pixel and compute processing power to deliver enhanced GPU performance.

C programming environment for the GPU

The NVIDIA® CUDA™ GPU computing software provides a C-language environment and tool suite that unleashes new capabilities to solve complex, visualization challenges such as real-time ray tracing and interactive volume rendering.

Next-generation vertex and pixel programmability shader model 4.0

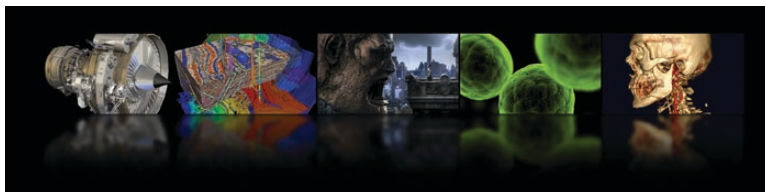
Reference standard for shader model 4.0 enabling a higher level of performance and ultra-realistic effects for next-generation OpenGL and DirectX 10 industry-leading professional applications.

Best-of-class industry solution

Flexible platform to deliver professionals best-of-class industry solutions paired with NVIDIA Quadro G-Sync II, SDI, or NVIDIA SLI™ technology.

Availability

NVIDIA Quadro FX family of professional graphics solutions are available in all HP desktop workstations including: HP Z400, Z600, Z800, xw4600, xw6600, xw8600, xw9400.



Images courtesy of Right Hemisphere, Landmark, a brand of the Halliburton Drilling, Evaluation and Digital Solutions, UVPFACTORY and Vital Images.

To learn more about NVIDIA Professional Graphics Solutions, visit www.nvidia.com/page/workstation.html.

For more information, contact your local HP reseller, visit www.hp.com/go/wsaccessories or call 1-800-888-9909.

Storage, hard drives and optical drives


The need for storage capacity increases as our applications become more robust and data files grow in size. Adding more or higher capacity hard drives will solve most capacity needs. Higher rpm drives typically deliver better performance plus, upgrading to a Redundant Array of Independent Disks (RAID) configuration with one HP storage controller can take performance even higher and can also enhance reliability through data redundancy. Optical burning devices allow you to store and back up your data in a cost-effective manner.

Why buy HP hard drives?

HP drive qualification tests rigorously check for data reliability, performance and adequate ElectroMagnetic

Interference (EMI) margins. Not all drives make the grade and those that do may receive HP customizations in order to meet HP's intense workstation standards. HP drives also offer the latest reliability and performance technologies like SMART and NCQ.

- Self Monitoring Analysis and Reporting Technology (SMART) allows the hard drive to monitor its performance and raise flags if imminent failures are predicted.
- NCQ (Native Command Queuing) allows the hard drive to optimize the order of multiple outstanding write or read commands improving overall throughput.

			HP Workstation xw4600	HP Workstation xw6600	HP Workstation xw8600	HP Workstation xw9400	HP Workstation Z400	HP Workstation Z600	HP Workstation Z800
Description	Part number	Smart Buy P/N							
HP 80 GB ⁵ SATA 3.0Gb/s Hard Drive	PY276AA		•	•	•	•			
HP 160 GB ⁵ SATA 3Gb/s NCQ 7200 HDD	PV944A	PV944UT	•	•	•	•	•	•	•
HP 250 GB ⁵ SATA 3Gb/s NCQ 7200 HDD	EA788AA	EA788UT	•	•	•	•			
HP 250 GB SATA 3.0Gb/s Hard Drive	PY278AA	PY278AT					•	•	•
HP 320 GB ⁵ SATA 3Gbps NCQ SMART IV Hard Drive	FH963AA						•	•	•
HP 500 GB ⁵ SATA 3Gb/s NCQ 7200 HDD	PV943A	PV943UT	•	•	•	•	•	•	•
HP 1 TB ¹³ SATA 3Gb/s NCQ 7200 HDD	GE262AA	GE262UT	•	•	•	•	•	•	•
HP 80 GB ⁵ WD Raptor SATA NCQ 10K HDD	EM172AA	EM172UT	•	•	•	•			
HP 160 GB ⁵ WD Raptor SATA NCQ 10K HDD	EW222AA	EW222UT	•	•	•	•	•	•	•
HP 300 GB ⁵ SATA 10K SFF in 3.5-inch Frame HDD	FM802AA		•	•	•	•	•	•	•
HP 3.5-inch Removable SATA HDD Carrier	RY103AA		•	•	•	•			
HP 3.5-inch Removable SATA HDD Frame/Carrier	RY102AA		•	•	•	•			
HP DX115 Removable HDD Carrier	NB792AA		•	•	•	•	•	•	•
HP DX115 Removable HDD Frame/Carrier	FZ576AA		•	•	•	•	•	•	•
HP 160 GB ⁵ SATA 10K SFF HDD	FX618AA							•	•
HP 300 GB ⁵ SATA 10K SFF HDD	FX619AA							•	•
HP 73 GB ⁵ SFF 2.5-inch SAS 3Gb/s 10K HDD	GE259AA			•	•				
HP 146 GB ⁵ SFF 2.5-inch SAS 3Gb/s 10K HDD	GE261AA			•	•				
HP 73 GB ⁵ SAS 3Gb/s 15K HDD	EA329AA	EA329UT	•	•	•	•			
HP 146 GB ⁵ SAS 3Gb/s 15K HDD	EA330AA	EA330UT	•	•	•	•	•	•	•
HP 300 GB ⁵ SAS 3Gb/s 15K HDD	EM174AA	EM174UT	•	•	•	•	•	•	•
HP 450 GB ⁵ SAS 3Gb/s 15K HDD	FM803AA	FM803UT	•	•	•	•	•	•	•
HP 64 GB ⁵ SATA SLC Solid State Drive – for workstations	NW778AA		•				•	•	•
LSI 3041E 4-Port SAS 3Gb RAID Card	EH417AA		•	•			•	•	•
LSI 8888ELP 8-port SAS HW RAID Card	GE258AA		•	•	•	•	•	•	•
HP SATA SuperMulti LightScribe Drive – BLK	AR630AA						•	•	•
HP 16X DVD+RW SuperMulti LS SATA Drive ^{6,9,12}	EW269AA	EW269UT	•	•	•	•			
HP SATA Blu-Ray Writer – BLK	AR482AA		•				•	•	•
HP 16X SATA DVD-ROM Drive BLK	AR629AA						•	•	•
HP 16X/48X DVD-ROM SATA Drive ^{6,7,9}	EW268AA		•	•	•	•			



LSI 3041E 4-Port SAS 3Gb RAID Card EH417AA

LSI 3041E 4-port SAS 3Gb RAID card is available in HP Workstations xw4600, xw600, Z400, Z600, and Z800.



LSI 8888ELP 8-port SAS HW RAID Card GE258AA

LSI 8888ELP 8-port SAS HW RAID card is available in all HP Workstation models.

Maximize storage performance on your HP Workstation with LSI SAS RAID cards. LSI offers you true hardware RAID solutions that offload host CPU and memory utilization that should be dedicated to your application needs. RAID gathers individual disk drives into a cohesive drive set, often called RAID groups or RAID arrays, that can be operated in unison.

Benefits of RAID:

- Higher levels of data protection achieved as redundancy is accomplished through mirroring, where the contents of one drive is duplicated on another drive.
- Drive capacity is aggregated and therefore larger storage volumes can be created.
- Performance is improved through disk striping, where the contents of a file are written to and read from, across several drives in the RAID group.

LSI SAS3041E-R

Industry leading SAS connectivity

Serial Attached SCSI (SAS) is a broadly supported industry standard that represents the evolution of SCSI beyond Ultra320. SAS is built on the time-tested and robust foundation of the SCSI protocol while delivering extraordinary improvements to performance, reliability, scalability, and availability.

High performance data protection

The true hardware RAID solutions offered by LSI provide a performance boost over alternative Host-Based RAID solutions more commonly used with SATA disk drives. Host-Based RAID places a significant burden on the system CPU resulting in lower system performance. If maximum system performance is important, then software-based (or host-based) RAID is not for you. The LSI SAS3041E-R is a 4-port 3 Gb/s internal SAS/SATA host bus adapter with hardware RAID 0, 1 and 10 capabilities for high-performance data protection, making it perfect for medium capacity internal storage applications.

Key features

- 3 GB/s per port
- (4) internal SATA x 1 connectors
- RAID 0, 1 and 10
- 4-lane 2.5 Gb/s PCI Express
- Connects to both SAS and SATA HDDs and tape drives

Key benefits

- No additional host CPU overhead
- Enables higher-performance SAS connectivity
- Up to 2.4 GB/s full duplex speed

MegaRAID SAS 8888ELP

Great storage flexibility

Flexibility best summarizes the features of the MegaRAID SAS 8888ELP. With selectable connectors, one card serves three deployment needs. Users can choose two connectors: two internal, two external or one each. An investment in the 8888ELP brings peace of mind, with its unique ability to operate with both internal and/or external disk equipment.

Superior performance

The MegaRAID SAS 8888ELP is designed to excel in both high I/O transaction and high bandwidth processing. With an integrated 500 MHz onboard processor supporting hardware RAID 5 and high performance data cache and host interfaces, the 8888ELP delivers impressive performance numbers—over 1.5 GB/s throughput—allowing workstation applications to run faster than ever with 1 MB stripe configurations.

Key features

- RAID levels 0, 1, 5, 10 and 50
- 8 SAS/SATA compatible ports
- Four selectable internal and external 3 GB/s SAS / SATA connectors
- x8 PCI Express host interface
- DDRII cache (512 MB)

Key benefits

- Advanced features to protect data
- High-performance architecture reduces IO bottlenecks

Second processors

More processors = more productivity

Multi-tasking is now a necessity in our daily computing needs and as the applications become more commanding, our need for processing power increases. Adding a second processor to your workstation is essential because it improves your efficiency and the productivity of your applications.

Why buy a second processor?

- Second processors are an ideal solution for customers working with large designs, complex analysis, scientific modeling or just simply running a number

of applications at once.

- Leveraging additional processing cores can improve your productivity in ways of multi-tasking, multi-threading and mega-tasking.

Why buy HP second processors?

- Afforded compatibility. HP second processors have the same chipset, hardware and drivers as the primary processors, helping to enable efficient performance.
- Software vendor (SV) certification. HP processors are certified by independent software vendors (ISVs) to provide that ISV applications perform reliably.

			HP Workstation xw4600	HP Workstation xw6600	HP Workstation xw8600	HP Workstation xw9400	HP Workstation Z400	HP Workstation Z600	HP Workstation Z800
Description	Part number	Smart Buy P/N							
Intel® Xeon® E5504 2.00 4 MB/1066 QC 2nd CPU	NF146AA	NF146UT							• •
Intel Xeon E5506 2.13 4 MB/1066 QC 2nd CPU	NF147AA	NF147UT							• •
Intel Xeon E5520 2.26 8 MB/1066 QC 2nd CPU	NF148AA	NF148UT							• •
Intel Xeon E5530 2.40 8 MB/1066 QC 2nd CPU	NF149AA								• •
Intel Xeon E5540 2.53 8 MB/1066 QC 2nd CPU	NF150AA								• •
Intel Xeon W5580 3.20 8 MB/1333 QC 2nd CPU	NF154AA								•
Intel Xeon X5550 2.66 8 MB/1333 QC 2nd CPU	NF151AA	NF151UT							• •
Intel Xeon X5560 2.80 8 MB/1333 QC 2nd CPU	NF152AA								• •
Intel Xeon X5570 2.93 8 MB/1333 QC 2nd CPU	NF153AA								• •
Intel Xeon E5205 ^{3,4} 1.86 6 MB/1066 DC 2nd CPU	GX566AA			• •					
Intel Xeon E5240 ^{3,4} 3.00 6 MB/1333 DC 2nd CPU	KY198AA			• •					
Intel Xeon X5260 ^{3,4} 3.33 6 MB/1333 DC 2nd CPU	GX568AA			• •					
Intel Xeon X5270 ^{3,4} 3.50 6 MB/1333 DC 2nd CPU	FP479AA			• •					
Intel Xeon X5272 ^{3,4} 3.4 6M B/1600 DC 2nd CPU	KY116AA			• •					
Intel Xeon E5405 ^{3,4} 2.00 12 MB/1333 QC 2nd CPU	GX569AA	GX569UT			•				
Intel Xeon E5410 ^{3,4} 2.33 12 MB/1333 QC 2nd CPU	GX570AA	GX570UT		• •					
Intel Xeon E5420 ^{3,4} 2.50 12 MB/1333 QC 2nd CPU	GX571AA	GX571UT		• •					
Intel Xeon E5430 ^{3,4} 2.66 12 MB/1333 QC 2nd CPU	GX572AA			• •					
Intel Xeon E5440 ^{3,4} 2.83 12 MB/1333 QC 2nd CPU	GX573AA	GX573UT		• •					
Intel Xeon E5450 ^{3,4} 3.00 12 MB/1333 QC 2nd CPU	GX574AA	GX574UT		• •					
Intel Xeon X5450 ^{3,4} 3.00 12 MB/1333 QC 2nd CPU	KD215AA			•					
Intel Xeon X5460 ^{3,4} 3.16 12 MB/1333 QC 2nd CPU	GX575AA			•					
Intel Xeon X5470 ^{3,4} 3.33 12 MB/1333 QC 2nd CPU	FP478AA			•					
Intel Xeon X5472 ^{3,4} 3.0 12 MB/1600 QC 2nd CPU	KY115AA			•					
Intel Xeon X5482 ^{3,4} 3.2 12 MB/1600 QC 2nd CPU	KY114AA			•					
Intel Xeon X5492 ^{3,4} 3.4 12 MB/1600 QC 2nd CPU	FP477AA			•					
AMD Opteron® 2220 ² 2.8 1 MB/1000 2nd CPU	RM696AA				•				
AMD Opteron 2222 ² 3.0 1 MB/1000 2nd CPU	RM697AA				•				
AMD Opteron 2376 ² 2.3 6 MB/1000 2nd CPU	FZ809AA				•				
AMD Opteron 2378 ² 2.4 6 MB/1000 2nd CPU	FZ810AA				•				
AMD Opteron 2380 ² 2.5 6 MB/1000 2nd CPU	FZ811AA				•				
AMD Opteron 2384 ² 2.7 6 MB/1000 2nd CPU	FZ813AA				•				
AMD Opteron 2387 ² 2.8 6MB/1000 2nd CPU	NH256AA				•				
AMD Opteron 2389 ² 2.9 6MB/1000 2nd CPU	NT236AA				•				

Input devices/audio/miscellaneous



Description	Part number	Smart Buy P/N	HP Workstation xw4600	HP Workstation xw6600	HP Workstation xw8600	HP Workstation xw9400	HP Workstation Z400	HP Workstation Z600	HP Workstation Z800
HP USB 2-Button Laser Mouse	GW405AA	GW405UT	•	•	•	•	•	•	•
HP USB 2-Button Optical Mouse	DC172B		•	•	•	•	•	•	•
HP PS/2 2-Button Optical Scroll Mouse	EY703AA		•	•	•	•	•	•	•
HP USB Optical 3-Button 2.9M OEM Mouse	ET424AA		•	•	•	•	•	•	•
HP USB Optical 3-Button Mouse	DY651A		•	•	•	•	•	•	•
HP 2.4 GHz Wireless Keyboard & Mouse	NB896AA		•	•	•	•	•	•	•
HP PS/2 Standard Keyboard	DT527A		•	•	•	•	•	•	•
HP USB Standard Keyboard	DT528A		•	•	•	•	•	•	•
HP USB Smart Card Keyboard	ED707AA	ED707AT	•	•	•	•	•	•	•
HP Optical Bay HDD Mounting Bracket	DY659A		•	•					
HP Optical Bay HDD Mounting Bracket – BLK – for workstations	NQ099AA						•	•	•
HP xw4/z4 Depth Adj Fixed Rail Rack Kit	EK729AA		•				•		
HP xw6 Depth Adj Sliding Rail Rack Kit	DY663A			•					
HP xw8/9 Sliding Rail Rack Kit	DY664A				•	•			
HP xw8000 Depth Adj Fixed Rail Rack Kit	AA640A				•	•			
HP z6/8 Adjustable Sliding Rail Rack Kit	NN124AA							•	•
HP Workstation to LTO SAS Int. Cable	EH925A		•	•	•	•	•	•	•
HP eSATA PCI Cable Kit	GM110AA			•	•	•	•	•	•
HP Internal Mini SAS 4i Adapter Cable	NQ097AA							•	•
HP Power Cord Kit	DM293A		•	•	•		•	•	•
HP (CMT) Solenoid Lock	DE618A		•	•			•	•	•
HP Business PC Security Lock Kit	PV606AA		•	•	•	•			
Security cable with Kensington lock	PC766A		•	•	•	•	•	•	•
HP FireWire®/IEEE 1394 PCI Card	PA997A		•	•	•	•	•	•	•
HP IEEE 1394b FireWire PCIe Card	NK653AA					•	•	•	•
HP FireWire 800 IEEE 1394b PCI Card	EA327AA		•	•	•	•			
HP Serial/Parallel PCI Card	KD062AA		•	•	•				
HP 1.44 MB Floppy Disk Drive	DY670A		•	•	•	•			
HP 1.44 MB Floppy Disk Drive Kit for Z – workstations	NK360AA						•	•	•
HP Thin USB Powered Speakers	KK912AA		•	•	•	•	•	•	•
SoundBlaster X-Fi XtremeGamer Audio Card	GE257AA		•	•	•	•			
Creative X-Fi Titanium PCIe Audio Card	NH222AA						•	•	•
HP 2.5-inch SFF 2:3 Bay Converter Kit	GM109AA				•				
HP 2nd Serial Port Adapter	PA716A		•	•					
HP Fan and Front Card Guide Kit	DY648A		•	•			•		
HP Internal USB Port Kit	EM165AA		•	•	•	•	•	•	•
HP xw8 PCI Front Fan Kit	EM163AA				•				
HP Z8 PCI Front Fan Kit	FX614AA								•
HP 2.5-inch HDD 2:1 Optical Bay Bracket	FX615AA							•	•
HP xw8/9 PCI Hold Down Kit, Bulk 10 Pack	EN764AA					•			
HP xw8/94 SAS Back Panel Connector Kit	EM164AA				•	•			•
Broadcom NetXtreme Gigabit Ethernet Plus NIC	FS215AA						•	•	•
Intel GbE CT Desktop NIC	FH969AA						•	•	•
Broadcom NetXtreme Gigabit PCIe NIC	EA833AA		•	•	•	•			
HP NC360T PCIe Dual Port Gigabit NIC	KU004AA				•	•		•	•
Intel Pro 1000 PT PCIe Gigabit NIC Card	EH352AA		•	•	•	•			
Agere 2006 PCI High-Speed 56K International SoftModem	EK694AA		•						
LSI PCIe x1 Hi-speed 56K SoftModem	FH970AA		•						
Modem RJ11 telecoms adapter kit	DC131C		•						
HP 16-in-1 Media Card Reader with PCI Card	EM718AA		•						
HP 22-in-1 Media Card Reader Kit for Workstations	NK361AA						•	•	•

For more information, contact your local HP reseller, visit www.hp.com/go/wsaccessories or call 1-800-888-9909.

3D Mouse and HP Remote Graphics

3D mouse

Crafted from the ground up to be a virtual extension of the user, a 3D mouse by HP allows you to experience unparalleled control and mastery over your 3D work. Its breakthrough functionality features efficient navigation, advanced comfort and smart technology speed keys for effortless control. Building on the two-handed power concept with the SpaceBall, the SpacePilot and SpaceExplorer remove even more barriers between you and your work.

To learn more, visit www.hp.com/go/hpspacepilot.

SpacePilot

The intelligent solution: It uses onboard intelligence to recognize the current application and modifies controls on the fly for seamless interaction with 3D models. A built-in LCD provides at-a-glance feedback to accelerate workflow.

SpaceExplorer

High-end performance at a mid-range price: Molded to the human hand, it puts all controls at the user's fingertips for enhanced comfort.


			HP Workstation xw4600							
			HP Workstation xw6600							
			HP Workstation xw8600							
			HP Workstation xw9400							
			HP Workstation Z400							
			HP Workstation Z600							
			HP Workstation Z800							
Description	Part number	Smart Buy P/N								
HP SpaceExplorer USB 3D Input Device	RY429AA	RY429UT	•	•	•	•	•	•	•	•
HP SpacePilot USB 3D Input Device	EF390AA	EF390UT	•	•	•	•	•	•	•	•

HP remote graphics

HP Remote Graphics Software is an advanced utility that allows you to remotely access and share your 3D graphics workstation desktop. This can be done across different platforms, providing you with a "just like local" experience.

With HP Remote Graphics Software you can:

- Remotely access 3D graphics workstations.
- Access applications on different platforms.
- Perform multi-user remote collaborations.

			HP Workstation xw4600							
			HP Workstation xw6600							
			HP Workstation xw8600							
			HP Workstation xw9400							
			HP Workstation Z400							
			HP Workstation Z600							
			HP Workstation Z800							
Description	Part number	Smart Buy P/N								
HP RGS 5.2.0 Desktop Node Locked E-LTU/E-Media	TA841AAE		•	•	•	•	•	•	•	•
1-Year RGS Node Locked Software Assurance	TA842AA		•	•	•	•	•	•	•	•
3-Year RGS Node Locked Software Assurance	TA843AA		•	•	•	•	•	•	•	•
HP RGS 5.2.0 Desktop Floating E-LTU/E-Media	TA844AAE		•	•	•	•	•	•	•	•
1-Year RGS Floating Software Assurance	TA845AA		•	•	•	•	•	•	•	•
3-Year RGS Floating Software Assurance	TA846AA		•	•	•	•	•	•	•	•

HP Performance series LCD monitors

HP Performance series LCD monitors include a range of large-screen, high-performance, advanced technology for the analyst, designer and engineer. Features found in the Performance series LCD monitor includes:


- **Most impressive front-of-screen performance:** HP Performance monitors incorporate the highest-performing, most-advanced LCD monitor panels to provide the sharpest and most brilliant images of text and graphics with a maximum native resolution of up to 2560 x 1600 pixels. High contrast ratios generate sharper images and wide viewing angles allowing you to view the screen from various positions without compromising image quality.
- **Easy tiling:** These monitors feature a detachable base and super-thin bezel edges (<12 mm on the LP1965) that allow you to tile multiple units and easily create a panoramic view for advanced applications. The integrated power supply reduces bulky "power bricks," improves cable management to help decrease clutter, and enables mounting of the monitor flush against the wall.
- **Adjustable positioning:** The detachable base and slim, lightweight profile simplify mounting, handling and shipping. Height-adjustment and easy tilt and swivel features let you easily find your personal comfort zone. 90-degree pivot rotation (select models) allows positioning of the monitor for

portrait and landscape viewing. The HP LCD Monitor Quick Release mounting solution comes standard as part of the stand of each Performance series monitor. The built-in Quick Release enables a variety of mounting scenarios, including bundling with another VESA-compliant device (compatibility varies by monitor). Please see the "Special features" section of this document for more information.

- **Enhanced connectivity:** A variety of inputs offer enhanced flexibility, including dual DVI-I, which allows the monitor to be used in either dual-analog mode or dual-digital mode and provides compatibility with the latest digital graphics cards. The built-in USB hub enables easy connectivity right on the desktop to peripherals such as the HP LCD Speaker Bar.
- **Smart software:** HP Display Assistant (bundled standard on all Performance series models except the LP3065) is a software utility that allows monitor adjustment, color calibration and security/asset management using the Display Data Channel Command Interface (DDC/CI) protocol of the connected PC instead of the monitor's on-screen display (OSD).

Why buy HP monitors?

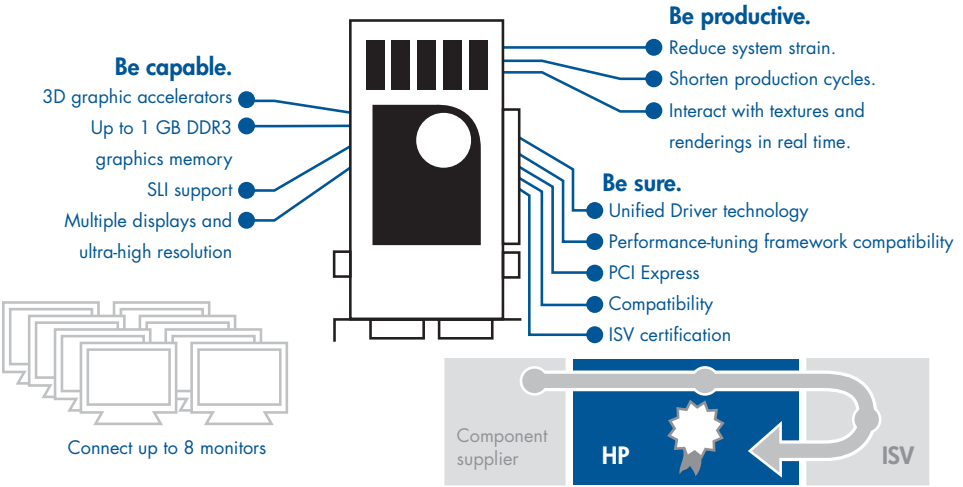
- 19-, 20-, 24- and 30-inch diagonal high-performance models available
- Expert-level features
- 3-3-3 limited warranty includes backlight
- Facilitated compatibility with HP products

			HP Workstation xw4600	HP Workstation xw6600	HP Workstation xw8600	HP Workstation xw9400	HP Workstation Z400	HP Workstation Z600	HP Workstation Z800
Description	Part number	Smart Buy P/N							
HP LP2065 20-inch LCD Monitor	EF227A4#ABA	EF227A8#ABA	•	•	•	•	•	•	•
HP L2275w 22-inch Widescreen LCD Monitor	KE289A4#ABA	KE289A8#ABA	•	•	•	•	•	•	•
HP DreamColor LP2480zx Professional LCD Display	GV546A4#ABA	GV546A8#ABA	•	•	•	•	•	•	•
HP LP2475w 24-inch Widescreen LCD Monitor	KD911A4#ABA	KD911A8#ABA	•	•	•	•	•	•	•
HP LP3065 30-inch Widescreen LCD Monitor	EZ320A4#ABA	EZ320A8#ABA	•	•	•	•	•	•	•

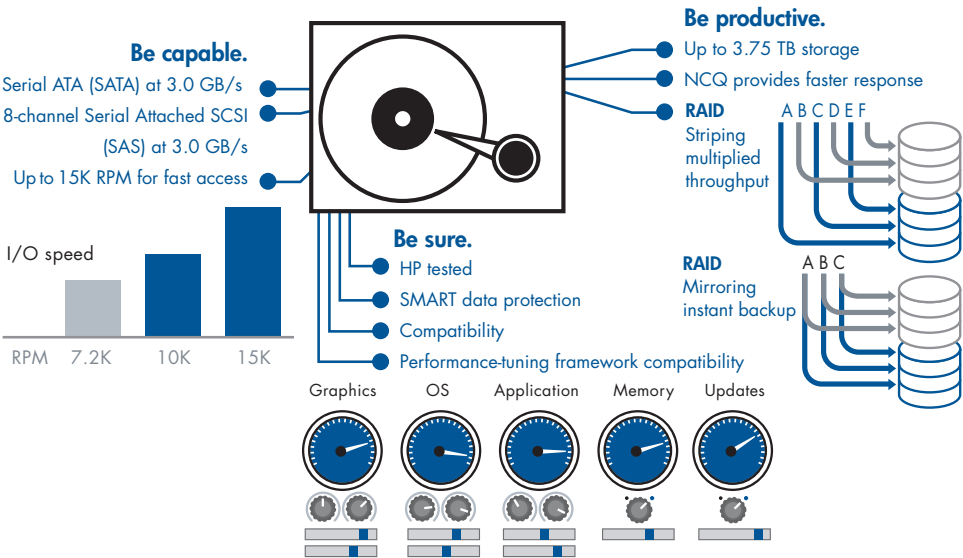
Why buy HP options?

Graphics and hard drives

When you need vision, step up your graphics card.



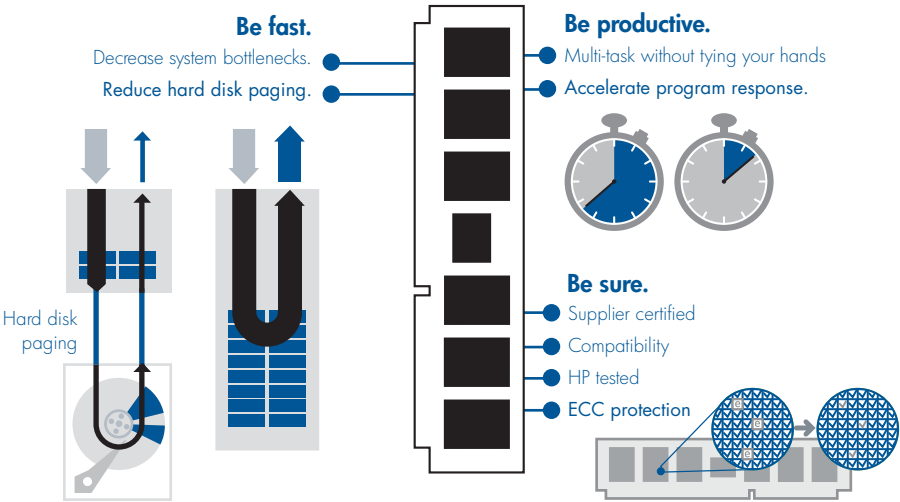
When you need capacity, choose a capable hard drive.



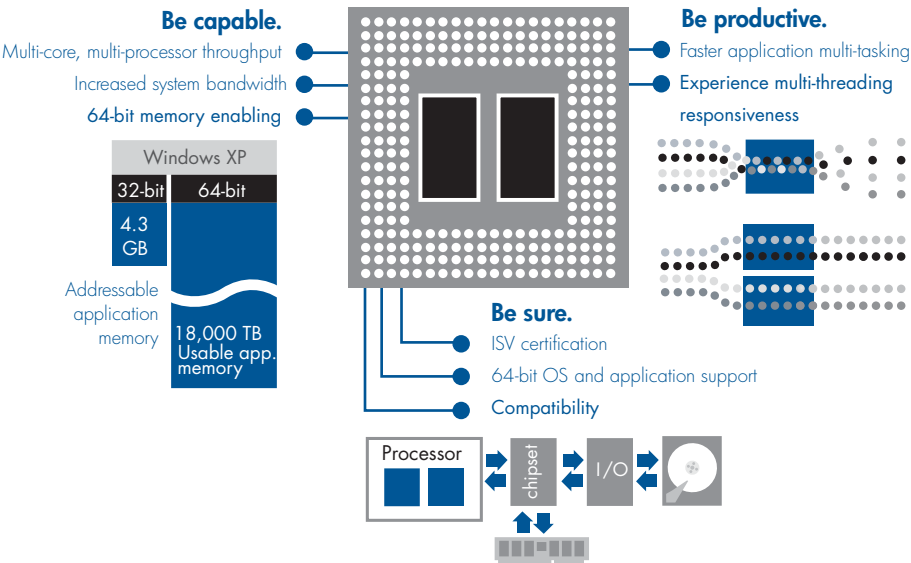
Why buy HP options?

Memory and second processors

When you need speed, choose qualified memory.



When you need power, choose a potent processor.



For more information, contact your local HP reseller, visit www.hp.com/go/wsaccessories or call 1-800-888-9909.

1. This system requires a separately purchased 64-bit operating system and 64-bit software products to take advantage of the 64-bit processing capabilities of the AMD Opteron 64 processor. Given the wide range of software applications available, performance of a system including a 64-bit operating system will vary. The theoretical memory limit for 64-bit systems is about 18 exabytes (18 billion gigabytes). Windows XP x64 is limited currently to 128 GB of physical memory and 16 GB of virtual memory.
2. AMD's model numbering is not a measurement of higher performance.
3. Intel EM64T requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel EM64T. Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS. Performance will vary depending on your hardware and software configurations. See www.intel.com/info/em64t for more information including details on which processors support Intel EM64T or consult with your system vendor for more information.
4. Intel's numbering is not a measurement of higher performance.
5. 1 GB = 1 billion bytes. Actual formatted capacity is less. Up to 8 GB of hard drive (or system disk) is reserved for the system recovery software. For Vista, up to 12 GB of system disk is reserved for system recovery software.
6. 16X maximum DVD+/RW drive data transfer rates up to 6000 KB/sec (CD) and 22,000 KB/sec (DVD)
7. 48X maximum CD-ROM drive transfers data at a rate up to 7200 KB/sec
8. 48X maximum DVD/CD-RW combo drive data transfer rates vary up to 7,200 KB/sec
9. Note that DVD-RAM cannot read or write to 2.6 GB single-sided/5.2 GB double sided, version 1.0 media.
10. LightScribe creates a grayscale image similar to a black-and-white photograph. LightScribe media required and sold separately. Does not permit copying of commercially available DVD movies or other copyright-protected materials. Intended for your original content and other lawful uses.
11. Maximum memory capacities assume 64-bit operating systems. Microsoft Windows XP (32-bit) supports 4 GB (with Microsoft 32-bit, the amount of usable memory will be dependent upon your system configuration. It may be less than 4 GB); 32-bit Linux can support up to 8 GB.
12. Up to 1 GB may not be available with 32-bit operating systems due to system resource requirements.
13. For hard drives, 1 TB = 1 trillion bytes. Actual formatted capacity is less. Up to 8 GB (for XP and XP Pro) and up to 12 GB (for Vista) of system disk is reserved for system recovery software.
14. This system requires a separately purchased 64-bit operating system and 64-bit software products to take advantage of the 64-bit processing capabilities of Intel technology. Quad-core processing available with Intel technology is designed to improve performance of this system. Given the wide range of software applications available, performance of a system including a 64-bit operating system and a quad-core processor will vary.

To learn more about HP workstation accessories, visit
www.hp.com/accessories/workstations

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