HP workstations

Empowering the imagination

HP workstations

For design, creativity and innovation – trust HP
When you're choosing a workstation, you need to know you have the right technologies to suit your needs now and in the future. HP continues to deliver the innovations and the latest technologies that make our workstations the best solutions available.

As the preferred supplier, HP provides technology solutions to innovative companies such as the DreamWorks studio, from enabling world-class CG animation with state-of-the-art workstations and servers to creating a rock-solid infrastructure for the company's critical business systems.

We're first to bring you the performance you need, in whatever size or shape that's right for you. HP workstations provide the stability and reliability to which you can entrust your business.
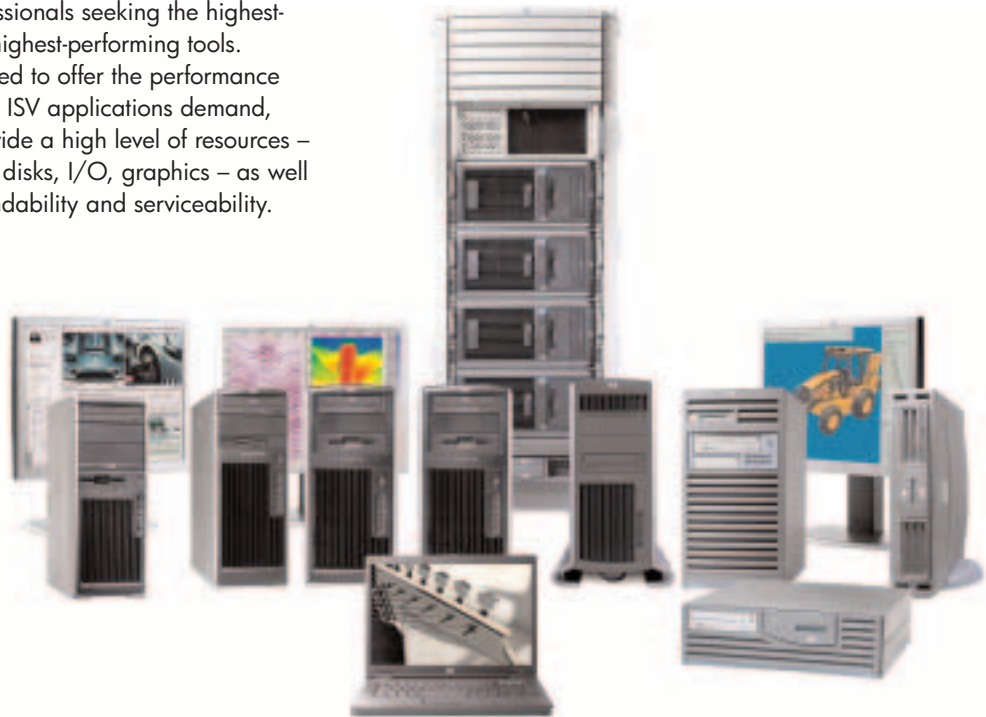
Delivering the latest technology
HP has driven many of the technologies found in today's competitive products, and continues to deliver the capabilities to meet growing demands ahead of anyone else. HP workstations are ideal for professionals seeking the highest-quality, highest-performing tools. Engineered to offer the performance specialist ISV applications demand, they provide a high level of resources – memory, disks, I/O, graphics – as well as expandability and serviceability.

The newest HP xw9300 Workstation delivers the ultimate 64-bit personal workstation performance and visualisation. Supporting dual PCI Express x16 graphics and dual AMD Opteron processors, the HP xw9300 is ideally suited for compute intensive environments and helps lower the cost of ownership.

The new HP Compaq nw8240 Mobile Workstation delivers outstanding graphics and processing performance in a widescreen, light weight design. Enhanced security and connectivity features combine with all day battery life (with optional travel battery) to make the HP nw8240 a powerful, portable workstation which is ideally suited for mobile business and on the road use.
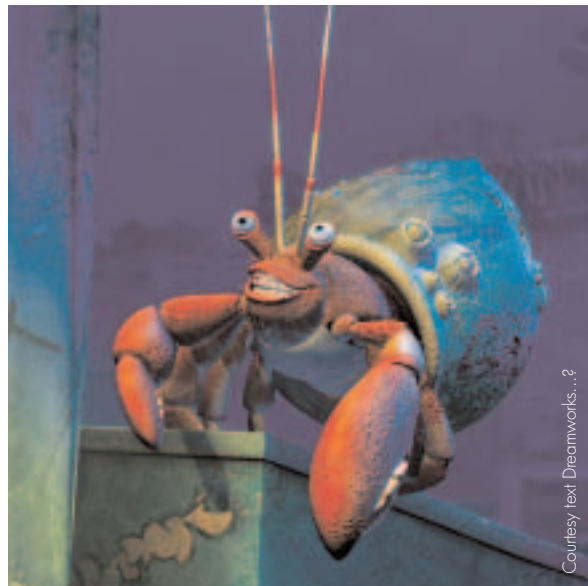
Whatever environment or industry sector you work in, HP offers the best solution for your particular requirements. HP's wide range of personal workstations for Windows and Linux, and PA -RISC workstations for UNIX®/HP-UX incorporate the latest technologies to meet your needs.

Choosing the right workstation for you

Whether you work in 2D, 3D, or DCC, when it comes to choosing the right workstation to suit your needs, you need to determine the features you require and match these with a workstation model that has the right balance of performance, expandability, serviceability and graphics capabilities to suit your particular needs.

The two tables below are designed to assist you choose the right balance of workstation features to meet your specific requirements. Each table clearly identifies each model's strength within particular features, compared to other models within the table.

For Windows and Linux® operating systems

Personal workstations

Mobile workstation

Model	xw4200	xw6200	xw8200	xw9300	nw8240
Performance	• •	• • •	• • •	• • • •	Mobile workstation
Expandability	• •	• •	• • •	• • •	Mobile workstation
Serviceability	• •	• • •	• • •	• • •	Mobile workstation
Memory (max.)	•	• •	• • •	• • •	Mobile workstation
Processor	Single Pentium 4	Single or dual Intel Xeon	Single or dual Intel Xeon	Single or dual AMD Opteron	Intel Pentium M – up to 2.13 GHz
Graphics	PCI Express or PCI	PCI Express or PCI	PCI Express	PCI Express	ATI Mobility FireGL V5000 with 128 MB video memory

Key: • good   • • very good   • • • excellent   • • • exceptional

For UNIX®/HP-UX operating systems

PA-RISC workstations

Model	b2600	c3700/50	j6750	xc8000
Performance	•	• •	• • •	• • •
Expandability	•	• •	• •	• • •
Serviceability	•	•	•	• •
Memory (max.)	•	• •	• • •	• • •
Processor	Single PA-RISC 8600 CPU 500 MHz	Single PA-RISC 8700 CPU 750 / 875 MHz	Single or dual PA-RISC 8700 CPU 875 MHz	1 or 2 dual-core PA-8800 processors, 900 MHz or 1.0 GHz
Graphics	HP fxe; HP fx5	HP fxe; HP fx10; FireGL-UX	HP fxe; HP fx10; FireGL-UX	AGP8X; ATI FireGL T2 and X1

Key: • good   • • very good   • • • excellent

Please note: Ratings are NOT comparable across tables.

HP personal workstations

HP Personal Workstations offer Windows and Linux users the industry's largest selection of high performing, high value systems using industry-standard chassis and providing leading graphics capabilities with application certifications. HP's new xw9300 Workstation and nw8240 Mobile Workstation demonstrate our commitment to continually push the boundaries of creation by using the latest technologies to offer you the power to fuel your imagination.

HP recommends Microsoft® Windows® XP Professional.

HP xw4200 Workstation

Screen image courtesy of UGS

Affordable uni-processor workstation with the latest technology

The HP xw4200 Workstation combines the latest Intel® and graphics technologies to deliver the highest uni-processor performance to designers, engineers, architects and other demanding power users. The versatile xw4200 provides incredible investment protection as a transition tool to the latest 64-bit computing. Backed by HP's experience, reliability and support, this workstation is engineered to evolve with your ever-changing business needs at an affordable price.

Key features and benefits:

- Microsoft® Windows® XP Professional and Linux Red Hat Enterprise Workstation 3.0

- Featuring Intel's latest 925X Express chipset and latest Pentium® 4 processors with DDR-2 533 MHz ECC memory – for reduced power consumption and increased data throughput

- Supports Intel's new Extended Memory 64 Technology, 4 internal hard disk drives, 8 USB ports, 6 bays/7 slots, 4 legacy PCI slots, 1 PCI Express (x16) graphics slot and 2 PCI Express (x1) I/O slots

- PCI Express (x16) graphics interface provides four times the total peak bandwidth and two times the uni-directional bandwidth of AGP graphics

- Versatile, convertible minitower allows for desk-side or desktop configuration, with award-winning tool-less access for easier upgrades, maintenance and serviceability

Ideally suited for:	
CAD/CAE	**2D/3D CAD**
Finance	**Front office**
DCC	**2D/3D animation**
R&D	**Software development**

HP xw6200 Workstation

Image courtesy of Aaron Reid & Antigravity Studios

Space-saving, dual-processor performance with the latest technology
The HP xw6200 Workstation is a scalable, expandable, dual-processing workstation in an industry-leading design form – small size, big performance. Designed for demanding, space-constrained environments, the xw6200 features the latest Intel Xeon technology for the power to manage massive amounts of real-time data uninterrupted.

Key features and benefits:
- Microsoft® Windows® XP Professional and Linux Red Hat Enterprise Workstation 3.0

- New-generation Intel E7525 chipset supports dual processing 64-bit computing (support for both 32-bit and 64-bit operating systems), 800 MHz system bus, dual-channel DDR-2 ECC memory and 1 MB cache – increases power and efficiency for demanding applications

- View eight monitors simultaneously and visualise huge amounts of data from multiple sources, without the need to toggle between applications

- PCI Express (x16) graphics interface offers significantly increased bandwidth over AGP graphics for exceptional clarity and 2D to high-end 3D performance

Ideally suited for:	
CAD/CAE	**3D solids modelling and analysis**
Finance	**Trading desk**
DCC	**3D animation**
R&D	**Problem analysis**

HP xw8200 Workstation

Image courtesy of Aaron Reid & Antigravity Studios

High-performance, most expandable dual-processing workstation with the latest technology
The HP xw8200 Workstation is the ultimate blend of performance and expandability. Combining the latest processing and I/O power from Intel, and new graphics technology from leading graphics providers, the xw8200 delivers top-of-the-line dual-processing performance, visualisation capacity, and expandability, along with all the reliability you would expect from HP.
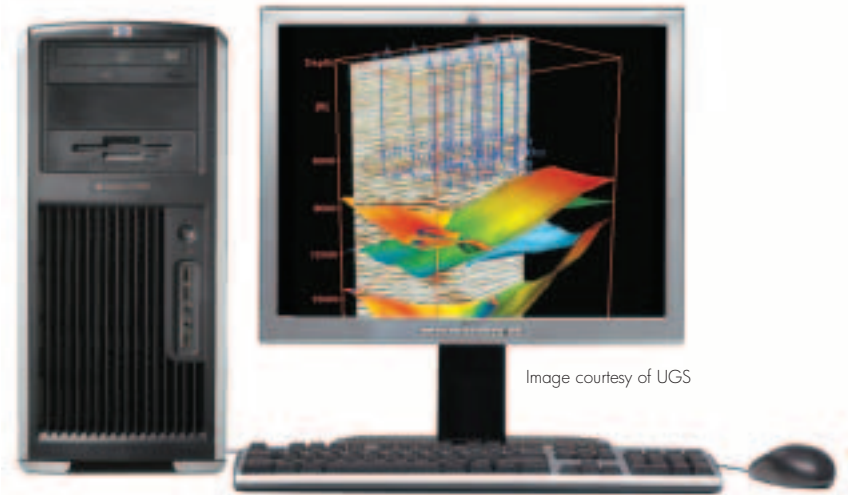
Key features and benefits:
- Microsoft® Windows® XP Professional and Linux Red Hat Enterprise Workstation 3.0

- New-generation Intel E7525 chipset supports dual processing 64-bit computing (support for both 32-bit and 64-bit operating systems), 800 MHz system bus, dual-channel DDR-2 ECC memory and 1 MB cache – increases power and efficiency for demanding applications

- Up to fiv5 internal HDDs, 3 optical disks, 2 PCI Express, 3 PCI-X and 2 PCI slots – providing capacity and performance for large models and storage-intensive projects

- PCI Express (x16) graphics interface offers significantly increased bandwidth over AGP graphics for exceptional clarity and 2D to high-end 3D performance

Ideally suited for:	
CAD/CAE	**Simulation and analysis**
Finance	**Risk analysis**
DCC	**3D animation and rendering**
R&D	**Complex and very large problem analysis**

5

HP's first dual PCI Express x16 graphics and dual AMD Opteron processor workstation, delivering the ultimate 64-bit personal workstation performance and visualisation

HP xw9300 Workstation

Image courtesy of UGS

New

HP recommends Microsoft® Windows® XP Professional.

Featuring, for the first time, dual PCI Express x16 graphics and dual AMD Opteron processors, the HP xw9300 Workstation delivers the ultimate 64-bit personal workstation performance and visualisation. Intelligently engineered in close collaboration with hardware and software partners, the HP xw9300 is ideal for scientists, engineers, designers and digital artists with extremely complex analyses or advanced visualisation requirements.

Key features and benefits:
- Microsoft® Windows® XP Professional and Linux Red Hat Enterprise Workstation 3.0
- Based on AMD's Opteron™ 200 series processors, this easy-to-manage workstation delivers high-performance dual processing power and offers complete software compatibility with Intel-based platforms

- Featuring AMD Opteron's Direct Connect Architecture – memory and I/O are connected directly to the CPU, optimising performance, helping balance throughput and enabling expandable I/O

- First workstation available based on NVIDIA's nForce Professional chipset featuring dual PCI-Express x16 graphics

- Supports up to 5 internal hard disk drives, 3 optical disks, 2 PCI Express x16, 3 PCI-X (1x 133 MHz and 2x 100 MHz) and 1 PCI slot, providing unprecedented workstation expandability

- Designed for ultimate performance and reliability, featuring an expandable, rackable and easily serviceable metal chassis with tool-less access plus new, quiet fan circuitry

Ideally suited for:

CAD/CAE	**Oil and Gas**
Finance	**Computer Aided Engineering**
DCC	**Engineering Design Automation**
R&D	**Scientific Research**

HP Compaq nw8240 Mobile Workstation

New

The new sleek, lightweight HP Compaq nw8240 Mobile Workstation is ideal for users who need to move about, and yet have power and graphics capabilities.

**Highly portable widescreen mobile workstation
with outstanding graphics performance and power**

The HP nw8240 Compaq Mobile Workstation delivers outstanding graphics and processing performance in a widescreen, light weight design. Enhanced security and connectivity features combine with all day battery life (with optional travel battery) to make the HP nw8240 ideally suited for mobile business and on the road use.

Key features and benefits:

• Microsoft® Windows® XP Professional

• Combines a stunning 15.4-inch wide screen with the latest Intel® Pentium® M processor, enhanced discrete graphics performance with ATI Mobility FireGL V5000 and Intel® Centrino™ mobile technology

• Weighing only 2.8 kg and just 28.0 mm thin, the HP nw8240 offers powerful computing in a travel-friendly design

• Incorporates HP ProtectTools enhanced security features, such as integrated Smart Card Reader, optional TPM embedded security chip and multifactor authentication – protects your device, data and network connection

• A primary battery provides up to 4.5 hours of battery life, which can be doubled with the uniquely designed travel battery (optional) for all day mobile power, plus innovative ambient light sensor to extend battery life by up to 20%

• Optional docking stations allow effortless desktop functionality, and the optional vertical monitor stand improves ergonomics and eliminates the need for a secondary monitor

• Unique features include HP ProtectTools, HP Client Management Solutions, long lifecycle, global services and common image, docking and accessories

Ideally suited for:	
CAD/CAE	**Please provide**
Finance	**Please provide**
DCC	**Please provide**
R&D	**Please provide**

HP PA-RISC Workstations

HP PA-RISC workstations provide proven, stable and reliable UNIX systems for increased performance, outstanding scalability and investment protection.

HP c8000 Workstation

Ultimate performance 2 or 4 processor workstation offering leadership graphics, low noise levels and large memory housed in a tool-less chassis
The new HP c8000 Workstation offers the ultimate in 64-bit workstation price and performance. Bringing 2-way and 4-way computing power to the desktop, the c8000 supports the latest industry-leading AGP 8X graphics and is compatible with your existing, trusted HP-UX application environment.

Designed to meet the most demanding technical workloads, with 4 times the processor and memory I/O bandwidth and 25% lower memory latency of previous generation PA-RISC workstations, the HP c8000 sets new standards for computing in automotive, aerospace and electronic design enterprises. With all this power and performance, the attractively designed c8000 is so quiet – it can integrate seamlessly into most demanding office environment.

Screen image courtesy of UGS PLM Solutions.

Ideally suited for:
Most demanding technical workloads in automotive, aerospace industries and electronic design automation (EDA)

Key features and benefits:

- Extreme processing power with 900 MHz and 1 GHz PA-8800 dual-core processor modules provide 2-way capability at a 1-way price and 4-way performance at a 2-way price

- It's surprisingly quiet (4.2 Bels) and attractively designed which means it is extremely suitable for desktop use

- For applications that demand high-end performance without exception, the HP zx1 chipset – designed for 1-to-4-way systems – enables greater-than-clock-rate scaling

- Supports 32 GB of high-performance error checking and correcting (ECC) SDRAM, designed to handle the largest workloads

- Binary-compatible with next generation PA RISC processors and with HP-UX 10.20, 11.0 and 11i applications, so there's no need to upgrade your application infrastructure

- Robust expansion capabilities of 2 processor sockets and 4 disk-drive bays allow your system to grow and configure as needed

HP b2600 Workstation

Call for usage rights (832)626-5056

Stable, single-processor workstation offering a robust feature set and reliability at exceptional value

This stable, single-processor workstation handles low- to mid-range mechanical and electrical design tasks with long-term stability for embedded solutions. It includes low maintenance, a great choice of graphics and a desktop or rack mount configuration.

Key features and benefits:

- HP's most affordable, proven and stable PA-RISC workstation

- Speed up memory-intensive tasks with a 500 MHz PA-8600 processor and up to 4 GB RAM memory

- Independent software vendor (ISV) certification

- Saves valuable space in confined offices while offering relief to users needing to maximise their workspace

- Enables universal access to all types of data across diverse, cross-functional teams

- Provides for a long, low maintenance life in embedded systems, OEM and customer care platforms

Ideally suited for:

OEMs, telecommunication customers and low-end designers

HP c3700/50 Workstation

Screen image courtesy of EDS PLM Solutions and Industrial Juguetera, S.A. (INJUSA)

The optimum combination of 3D graphics performance, expandability and memory in a high-speed, single-processor workstation

Delivering extreme uni-processor power for the most intensive tasks, the HP c3700/50 Workstation is a high-speed, single-processor workstation offering the optimum combination of performance, flexibility and value.
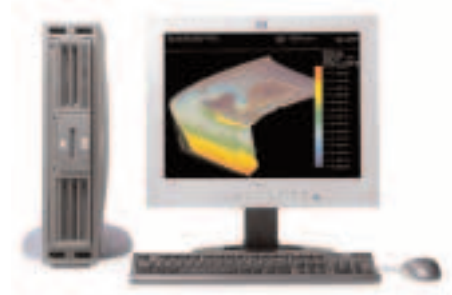
Key features and benefits:

- 875 MHz PA-8700+ processor helps you complete complex designs faster with outstanding application performance

- 8 GB SDRAM capacity delivers the largest RAM capacity available on any uni-processor workstation

- Assist the toughest designs with HP Fire GL-UX, HP fx5, HP fx10 and HP fxe graphics cards

- Rack mountable, supports your choice of configuration – on its side or as an upright desktop – to optimise space utilisation in your computer rooms

- Expansive tower with 6 industry-standard PCI slots gives you the flexibility to expand your system with more capacity for PCI I/O cards

Ideally suited for:

Engineers and scientists in automotive, aerospace industries and electronic design automation

HP j6750 Workstation

Call for usage rights (832)626-5056

High-performance, dual-processor workstation delivering high memory capacity and expandability for the toughest designs and simulations

Offering the ultimate performance for today's toughest designs and simulations, the HP j6750 Workstation is a dual-processor workstation that delivers the power and capacity to invent the future.

Key features and benefits:

- Achieve faster complex designs with outstanding application performance from the dual 875 MHz PA-8700+ processors (up to two processors)

- 16 GB SDRAM capacity for maximum application performance

- Space-efficient, rack-mountable design

- 64-bit x 64-bit operating system and microprocessor

- Handles the toughest design tasks with HP fxe Handles the toughest design tasks with HP fxe, HP fx10 and HP Fire GL-UX graphics cards

- 1.9 GB/s I/O peak performance with 2.25 MB on-chip cache for enhanced system performance, application speed and throughput

Ideally suited for:

Very large designs and simulations

Graphics solutions

You're free to choose exactly what you want!

With over 20 years of graphics experience and 500+ graphics patents, HP offers the most complete graphics family across three different architectures and three operating systems. Our solutions are engineered and tuned for optimum performance, image quality, realism and reliability, and certified with our key strategic partners. With HP, you get the latest graphics technology as soon as it's available on a fast, reliable platform with a single point of support. Find out more by visiting: www.hp.com/go/leadershipgraphics

Courtesy text Dreamworks...?

Professional 2D & multi-display applications

NVIDIA Quadro4 280 NVS (PCI)
Maximise your productivity
Dual-display support
64-MB DDR SDRAM memory
Analogue and digital output support
NVIDIA nView for multi-display management
AGP8x support

NVIDIA Quadro4 280 NVS (PCI-E)
Optimised for professional 2D workstation configurations
Permits work to be viewed on two monitors with nView multi-display software
64 MB DDR SDRAM memory
Dual 350-MHz RAMDACs deliver crystal-clear images
Dual TMDS transmitters support the latest flat-panel monitors
Single high-density connector supports dual-analogue or digital displays
Unified driver architecture (UDA) provides easy installation and manageability

NVIDIA Quadro4 400 NVS
Maximise your screen real estate
Achieve enhanced productivity
Quad-display support
64-MB DDR SDRAM memory
Analogue and digital output support
NVIDIA nView for multi-display management
AGP4x support

ATI RADEON 7000
Leading 2D graphics performance
Dual-display support: dual-CRT or single-CRT and single digital connection
32-MB DDR SDRAM memory
Analogue and digital output support
DirectX, DirectDraw, Direct3D and OpenGL support across all displays
Full AGP2x/AGP4x support

Entry-level 3D for small models & visual realism

NVIDIA Quadro FX 540 (PCI-E)
Professional 3D graphics solution providing value
Delivers quality, precision, performance and programmability
Provides all the Quadro FX family's advanced features, benefits and certifications
128 MB DDR memory, 128-bit memory interface and 8.8 GB/s memory bandwidth
Unified memory architecture dynamically allocates memory between graphics subsystems for maximum memory bandwidth utilisation

ATI FireGL V3100 (PCI-E)
Performance-leading graphics at an entry-level price
Revolutionary combination of performance and features
128 MB DDR memory and programmable graphics pipeline
Performance optimised OpenGL and DirectX drivers
Perfect solution for the high-end CAD and professional DCC user communities requiring breakthrough application performance

Entry-level 3D for small models & visual realism (continuation)

HP fxe
Suits graphics-intensive tasks
For HP PA-RISC workstations running HP-UX
48 image planes for double-buffered, true colour
Four-monitor configurations with single logical HP screen
Hardware-accelerated texture mapping – 3.5 MB
Accelerates OpenGL and DirectX professional applications

Mid-range 3D for bigger models & visual realism

NVIDIA Quadro FX 1400 (PCI-E)
Ideal graphics solution for CAD, DCC and Scientific sectors – tested and certified with all major applications
Delivers industry leading performance, advanced features and programmability
128 MB DDR memory, 256-bit memory interface and 19.2 GB/s memory bandwidth
Unified memory architecture dynamically allocates memory between graphics subsystems for maximum memory bandwidth utilisation

HP fx5 pro
For large assembly and whole product review designers
Use with HP-UX-based on HP PA-RISC workstations
Greater model complexity for increased design confidence
Three PA-RISC geometry engines
3x greater hardware texture memory now standard (up to 48 MB)
Analogue and digital outputs for improved image quality
Accelerates OpenGL and DirectX professional applications

NVIDIA Quadro FX 1300 (PCI-E)
Delivers performance, advanced features and programmability
Unified memory architecture, which dynamically allocates memory between graphics subsystems
128 MB 275 MHz DDR SDRAM graphics memory
256-bit memory interface
17.6 GB/s memory bandwidth
PCI-Express x16

ATI FireGL V5100 (PCI-E)
Delivers unprecedented speed and image quality for real-time visualisation
Ultimate price/performance leader for engineers and artists
Built on PCI Express x16 lane architecture
128 MB DDR unified graphics memory
Dual-display support via DVI and VGA outputs
Optimised and certified for applications based on OpenGL and Microsoft DirectX 9.0

High-end 3D for large models & demanding visual realism

ATI Fire GL4
Maximum workstation performance
Dual, digital-monitor support
NVIDIA NV25GL GPU
AGP2x/4x Pro50
128-MB DDR SDRAM memory
Two DVI-I digital monitor outputs, one 3-pin Mini DIN stereo output
Accelerates OpenGL and DirectX professional applications

HP fx10
Rapid visualisation
For engineers, industrial designers and scientists
Greater model complexity for increased design confidence
Six PA-RISC geometry engines
3x greater hardware texture memory as standard (up to 110 MB)
Analogue and digital outputs for improved image quality
Accelerates OpenGL and DirectX professional applications

HP Fire GL-UX
For complex engineering and design work
Use with HP-UX-based on HP PA-RISC workstations
Binary compatibility with HP fx10 pro
Binary compatibility with ATI Fire GL4
128-MB of unified frame buffer and texture storage
CRT or digital display support
Accelerates OpenGL and DirectX professional applications

ATI Mobility FireGL 9000
Top-of-the-line ATI graphics
For HP Compaq nw8000 Mobile Workstation
Unprecedented 3D rendering and video performance
Superb image clarity for native and lower resolutions
Enhanced texture mapping performance
Multiple display output
Accelerates OpenGL and DirectX professional applications

NVIDIA Quadro FX 3400 (PCI-E)
Powerful 3D computing with unlimited programmability
New level of interactivity for engineers and designers
Enables unprecedented performance, features and photo-realistic image quality
256 MB 450 MHz GDDR3 SDRAM graphics memory
256-bit memory interface
Dual Link DVI-I + Single Link DVI-I

For full graphics card compatibility, visit www.hp.com/go/leadershipgraphics

Monitors

Performance range

Maximise your workstation performance with the HP performance range, the most technologically advanced monitors on the market today, offering precision, glare-free imaging technology and expansive viewing areas to match all kinds of professional applications.

HP P1230 monitor

Offering top-quality precision imaging, this flat-screen CRT monitor is ideal for a broad range of workstation and power users, including graphic artists, CAD/CAM users, desktop publishers, financial analysts and programmers.

510 mm/20-inch viewable screen area
Optimised for 1600 x 1200 or 1280 x 1024 resolution
0.24-mm aperture grille pitch
Energy Star and TCO '03 compliant
3-year parts and labour warranty, including backlight

HP L1955

The monitor offers superior clarity with an extra bright screen and 1000:1 contrast ratio. The 5.1 in (13 cm) height-adjustable base, plus a capability for portrait or landscape viewing makes it comfortable to use. The large viewing angle and super-thin bezel (13mm) is ideal for multi-display users, and a "quick release" detachable panel simplifies mounting and handling.

482.5 mm/19 inch viewable screen area
176 horizontal, 176° vertical viewing angle
Optimised for 1280 x 1024 resolution
16 ms response time
Energy Star and TCO '03 compliant
3-year parts, labour and on-site warranty

HP L2035

This high-performance 20-inch screen delivers top-of-the-line performance features, such as picture-in-picture support, ideal for CAD/CAM applications, and perfect positioning, with the industry's widest viewing angles, adjustable tilt and swivel features and a height-adjustable base.

510 mm/20.1-inch viewable screen area
170° horizontal, 170° vertical viewing angle
Optimised for 1600 x 1200 resolution
0.255 mm horizontal dot pitch
Energy Star and TCO '03 compliant
3-year parts, labour and on-site warranty

HP L2335

This high-performance 23-inch screen delivers top-of-the-line performance features, such as picture-in-picture support and perfect positioning, with the industry's widest viewing angles, adjustable tilt and swivel features and a height-adjustable base. This screen can also display video format as HDTV.

With multiple video inputs
584 mm/23-inch viewable screen area
170° horizontal, 170° vertical viewing angle
Optimised for 1920 x 1200 resolution
0.258 mm horizontal dot pitch
Energy Star and TCO '03 compliant
3-year parts, labour and on-site warranty

For additional product details, please visit www.hp.com/eur/monitors

HP visualisation solutions

HP Multi-Channel Graphics Workstations

Cost-effective solution for power walls with up to two display channels
A single HP workstation with multiple graphic output allows a large number of unmodified graphics software to be distributed over several screens. This entry-level solution utilises latest workstation graphics technology, supports small power walls and is easy to upgrade.

HP Graphics Clusters

Extreme scalable computing and visualisation
Distribute massive data sets across a cluster of HP workstations for extreme scalable computing and visualisation on the largest display walls and caves. This powerfull solution uses HP workstation systems with the latest PCI-Express graphics technology as building blocks with optional scalable video compositing based on ORAD technology. It breaks through previous barriers of performance, number of rendering nodes, image scaling and resolution.

HP sv7 Visualisation Centre

Invent in real time at real size
This solution combines up to eight HP xw8000 Workstation render nodes per display to drive your largest display walls and caves. What were once component level designs, integrated at manufacturing, can become complete digital prototypes. This solution makes accurate real-time visualisation of complete digital prototypes a reality, keeps pace with your thought process and grows with your needs.

HP recommends Microsoft®
Windows® XP Professional.

	HP Multi-Channel Graphics Workstation Entry-level visualisation for up to two display channels	**HP Graphics Cluster** Scalable visualisation for massive, distributed datasets	**HP sv7 Visualisation Centre** Scalable visualisation for high-end design review
Ideal for	All visualisation markets	Automotive/MDA, scientific research, geo-science (oil and gas), chemical and biochemical, defence visual simulation	High-end MDA, styling review, engineering design review, manufacturing simulation
Application availability	Broad availability. Runs all unmodified Windows and Linux based visualisation software.	Middleware-enabled or cluster-aware Windows and Linux applications	Transparent support for standard HP-UX OpenGL applications
Display environment support	Supports up to two display channels	Single display, largest display wall (edge match or edge blend), CAVE displays	Single display, largest display wall (edge match or edge blend), CAVE displays
Performance	Single workstation performance with latest graphics technology	Data distributed across unlimited render nodes and display channels; Performance scalable with optional ORAD video compositor technology	4 or 8 render nodes per display channel; unlimited display channels;

For additional product details, please visit www.hp.com/eur/workstations

Software partnerships

So that you can be productive immediately, we've ensured seamless integration and thorough optimisation of today's demanding applications on HP workstations.

We've formed strong, highly focused partnerships and key technology alliances with the leading software vendors. Together we design our platforms for optimum performance and productivity. Once we've tested and proved that applications run smoothly, we certify our platforms.

Our shared expertise creates solutions that are configured and optimised for your specific requirements. You can choose from innovative new ways of leasing both your hardware and software. And your questions and issues are resolved quickly, thanks to our collaborative support.

The table below indicates our primary application partners.

HP recommends Microsoft® Windows® XP Professional.

Courtesy text Dreamworks...?

CAD	CAE	DCC	GIS	EDA	Visualisation
Autodesk	Abaqus	Adobe®	Autodesk	Cadence	Barco
AVEVA	Altair	Alias	ERDAS	Mentor Graphics	Dassault Systèmes
Bentley Systems	Ansys	Avid and Softimage	ESRI	Synopsys	Fakespace
Dassault Systèmes	ESI Group	canopus	Intergraph		Orad
ICEM Technologies	Fluent	discreet	Landmark		PTC
PTC	HKS	Matrox	Paradigm		Realtime Technologies
SolidWorks	Mecalog	Media100	Schlumberger		UGS
Tebis	MSC.Software	Pinnacle Systems			Vircinity
UGS	PTC				

HP Financial and Care Pack Services

Smart Finance makes technology solutions easy to own and easy on the balance sheet

HP Smart Finance Service helps you achieve your business goals with greater financial flexibility to take full advantage of business technology. Smart Finance makes technology solutions easy to own and easy on the balance sheet – enabling you to focus your financial and other resources on managing and growing your business.

For more information on HP Smart Finance visit: www.hp.co.uk/go/hpfinancialservices

Pre-packaged support with HP Care Pack Services

HP Care Pack Services provide pre-defined packaged support for your HP products, with a range of warranty extensions and upgrades that are easy and affordable to purchase. You can secure the most appropriate type and speed of response to reduce downtime, maximise performance and cut the total cost of ownership.

For more information on HP Care Pack Services, visit: www.hp.com/hps/carepack

HP Workstations specifications

	Processor & Chipset	Operating system	Memory	Hard drives	Graphics	Dimensions (H x W x D) / Weight
xw4200	Intel 925X chipset with EM64T (Extended Memory 64 technology) and Hyper-Threading Technology, Intel Pentium 4 Processor 2.8 – 3.8 GHz with 800 MHz FSB and 1MB L2 cache and DDR2-533 memory	Microsoft Windows XP Professional or Red Hat Enterprise Linux WS 3.0	Up to 4 GB DDR-2533 ECC (8.5 GB/s) (4 DIMMs in 2 pairs, dual-channel architecture)	40, 80, 160, 250, 400 GB (7200 rpm) or 74 GB (10k rpm) SATA;73, 300 GB (10k rpm) or 36, 73, 146 GB (15k rpm) SCSI	**Professional 2D:** NVIDIA NVS 280 PCI-E or PCI **Entry 3D:** NVIDIA Quadro FX 540 (PCI-E), ATI FireGL V3100 PCI-E **Mid-range 3D:** NVIDIA Quadro FX 1400 (PCI-E), NVIDIA Quadro FX 1300 PCI-E, ATI FireGL V5100 **PCI-EHigh-end 3D:** NVIDIA Quadro FX 3400 PCI-E	45.0 x 16.8 x 45.5 cm / Minimum configuration: 15 kg Maximum configuration: 18 kg
xw6200	Intel 7525 chipset with EM64T and Hyper-Threading Technology, 1 or 2 Intel Xeon Processor 2.8 – 3.8 GHz with 800 MHz FSB and 1MB L2 cache, DDR2-400 memory	Microsoft Windows XP Professional or Red Hat Enterprise Linux WS 3.0	Up to 8 GB dual-channel ECC DDR-2 400 MHz SDRAM (4 DIMMs in 2 pairs, dual-channel architecture	40, 80, 160, 250, 400 GB (7200 rpm) or 74 GB (10k rpm) SATA; 73,300 GB (10k rpm) or 36, 73, 146 GB (15k rpm) SCSI	**Professional 2D:** NVIDIA NVS 280 PCI-E or PCI **Entry 3D:** NVIDIA Quadro FX 540 (PCI-E) ATI FireGL V3100 PCI-E, **Mid-range 3D:** NVIDIA Quadro FX 1300 PCI-E, ATI FireGL V5100 PCI-E, NVIDIA Quadro FX 1400 (PCI-E) **High-end 3D:** NVIDIA Quadro FX 3400 PCI-E	44.1 x 16.5 x 44.0 cm / Minimum configuration: 15 kg Maximum configuration: 19 kg
xw8200	Intel 7525 chipset with EM64T and Hyper-Threading Technology, 1 or 2 Intel Xeon Processors 2.8 – 3.6 GHz with 800 MHz FSB and 1MB L2 cache, DDR2-400 memory	Microsoft Windows XP Professional or Red Hat Enterprise Linux WS 3.0	Up to 16 GB dual-channel ECC DDR-2400 MHz SDRAM (8 DIMMs in 4 pairs, dual-channel architecture)	40, 80, 160, 250, 400 GB (7200 rpm) or 74 GB (10k rpm) SATA; 73, 300 GB (10k rpm) or 36, 73, 146 GB (15k rpm) SCSI	**Professional 2D:** NVIDIA NVS 280 PCI-E or **PCIEntry 3D:** NVIDIA Quadro FX 540 (PCI-E), ATI FireGL V3100 PCI-E **Mid-range 3D:** NVIDIA Quadro FX 1300 PCI-E, ATI FireGL V5100 PCI-E, NVIDIA Quadro FX 1400 (PCI-E) **High-end 3D:** NVIDIA Quadro FX 3400 PCI-E	45.5 x 21.0 x 52.6 cm / Minimum configuration: 19 kg Maximum configuration: 24 kg
xw9300	NVIDIA nForce Professional with AMD-8131 HyperTransport PCI-X tunnel, PLUS single or dual AMD Opteron 200 series processor(s) with AMD64 Technology & HyperTransport; 246 (2.0GHz), 248 (2.2GHz), 250 (2.4GHz), 252 (2.6GHz)	Microsoft Windows XP Professional with service pack 2, or Red Hat Enterprise Linux Workstation 3 Update 4 (64-bit), or HP Installer CD for Red Hat Linux 7.2, 7.3 and Workstation 3 Box Set (32bit and 64 bit)	16 GB maximum; 8 DIMMs; DDR1-400 ECC (512 MB, 1 GB, 2 GB); up to 12.8 GB/sec throughput	80, 250, or 400 GB Serial ATA hard drives (7200 rpm); or 74 GB Serial ATA hard drive (10K rpm); or 73, 300 GB Ultra 320 SCSI Hard Drive (10,000 rpm) or 36, 73 or 146 GB Ultra320 SCSI Hard Drive (15K rpm)	**Entry 3D:** NVIDIA Quadro FX 540 (PCI-E) **Mid-range:** NVIDIA Quadro FX 1400 (PCI-E)	45.5 x 21.0 x 52.5 cm / Minimum configuration: 19 kg Maximum configuration: 24 kg
nw8240	Mobile Intel 915PM Express Chipset with Intel Pentium M processor (1.60 – 2.13 GHz, 533 MHz FSB, 2 MB L2 cache)	Microsoft Windows XP Professional SP2, or Microsoft Windows XP Home Edition SP2 (select countries only), or FreeDOS	256 MB, 512 MB, or 1024 MB 400 MHz or 533 MHz DDR II SDRAM; two SODIMM slots	40, 60, 80 GB 5400 rpm SMART; 60 GB 7200 rpm SMART	**Entry 3D:** NVIDIA Quadro FX 540 (PCI-E) **Mid-range:** NVIDIA Quadro FX 1400 (PCI-E)	2.8 (at front) x 35.5 x 25.9 mm) / 2.58 kg (with MultiBay II weight saver); 2.71 kg (with MultiBay II DVD optical drive)
b2600	500 MHz PA-RISC8600 CPU with 1.5 MB on chipcache	HP-UX 10.20 ACE9912, HP-UX11.0,11[i] TCOEiand MTOE[ii]	512 MB to 4 GB 120 MHz ECCS DRAM (1.9 GB/s); 4 slots	36 or 146 GB 10,000 rpm Ultra 2 SCSI LVDdrives (up to 2)	**Professional 2D:** Choice of HP fx5 or HP Fxe [**Entry 3D:** NVIDIA Quadro FX 540 (PCI-E) **Mid-range:** NVIDIA Quadro FX 1400 (PCI-E)]	12.7 x 40.6 x 45.7 cm /18.2 kg Minimum configuration: 18.2 kg fully loaded: 20.3 kg
c3700/ c3750	PA-RISC 8700CPU 750/75MHz; Total cache 2.25 MB; instruction 0.75 MB; data 1.5 MB	HP-UX 11.0, 11[i] TCOE[ii] and MTOE[iii]	512-MB to 8-GB 120-MHz ECCS DRAM (1.9 GB/s); 8 slots	36 or 146 GB 10,000 rpm, or 73 GB 15,000 rpm Ultra 2 SCSI LVD drives (up to 2)	**Professional 2D:** Choice of HP Fire GL-UX, HP fx10, HP fx5 or HP fxe **Entry 3D:** NVIDIA Quadro FX 540 (PCI-E) **Mid-range:** NVIDIA Quadro FX 1400 (PCI-E)	49.5 x 44.5 x 22.9 cm / Minimum configuration: 20.9 kg fully loaded 25.4 kg
j6750	PA-RISC 8700+ CPU 875 MHz; Total cache 2.25 MB; instruction 0.75 MB; data 1.50 MB	HP-UX 11.0, 11[i] TCOE[i] and MTOE[ii]	1-GB to 16-GB 120 MHz ECCS DRAM (1.9 GB/s); 16 slots	36 or 146 GB 10,000 rpm, or 73 GB 15,000 rpm Ultra 2 SCSILVD drives (up to 2)	**Professional 2D:** Choice of HP Fire GL-UX, HP fx10 or HP fxe **Entry 3D:** NVIDIA Quadro FX 540 (PCI-E) **Mid-range:** NVIDIA Quadro FX 1400 (PCI-E)	65.5 x 49.5 x 13.7 cm / Minimum configuration 18.2 kg fully loaded 21.8 kg
c8000	1 or 2 dual-core PA-8800 processors, 900 MHz or 1.0 GHz 2-way standard; 4-way optional 1.5 L1 cache 32 MB L2 cache	HP-UX 11[i] TCOE, HP-UX 11[i] MTOE[iii]	Up to 16 GB PC2 100 registered ECC DDR-266 (8 DIMMs); Up to 32 GB when 4 GB DIMMs are available	36, 73, 146 GB (10K rpm), or 73 GB (15K rpm) Ultra 320 SCSI drives; maximum of 584 GB of internal storage	**Professional 2D:** HP fxe (1 display per card, max. 4) **Entry-level 3D:** NVIDIA Quadro FX 540 (PCI-E) **Mid-range:** NVIDIA Quadro FX 1400 (PCI-E) **Mid to high-end 3D:** ATI FireGL X1-256p (dual display capable)	Tower configuration: 49 x 28.7 x 57.2 cm; Rack mount configuration: 20.3 x 42.4 x 57.2 cm / Minimum and maximum tower configuration: 22.5 kg to 28.3 kg Minimum and maximum rack configuration: 21.9 kg to 27.8 kg

[i] Intel's numbering is not a measurement of higher performance   [ii] Technical Computing Operating Environment   [iii] Minimal Technical Operating Environment

Courtesy text Dreamworks...?

HP EMEA sales offices

Albania	+43 125 000 60 22	Latvia	+371 800 80 12
Algeria	+213 61 56 45 43	Lithuania	+370 5 210 33 33
Austria	0800 242 242	UAE	800 49 10
Bahrain	800 171	Macedonia	+43 125 000 60 22
Other Gulf Countries (Oman, Qatar, Kuwait,		Malta	+43 125 000 60 22
Yemen, Syria, Lebanon, Jordan)	+971 4 881 81 00	Moldova	+43 125 000 60 22
Belgium		Morocco	+212 2 240 47 47
HP Support	+32 2 626 88 06	Netherlands	0800 266 72 72
Technical support	+32 2 778 38 00	Norway	0800 16 00
Bosnia-Herzegovina	+43 125 000 60 22		+47 24 09 75 00
Bulgaria	+359 2 960 19 40	Poland	0801 522 622
Croatia			+48 565 77 00
HP General	+385 1 606 02 00	Portugal	808 20 60 01
Czech Republic	+420 2 61 30 73 10	Romania	+40 21 315 44 42
Denmark	+45 70 11 77 00	RSA	0800 118 883
Egypt	0800 888 78 88	Russia	+7 095 797 3 797
Estonia	+372 681 38 23	Slovenia	+386 1 230 74 20
Finland	+358 10 217 2700	Slovakia	0800 147 147
France	+33 1 43 62 34 34	Saudi Arabia	800 897 14 33
Germany	+49 (0)18 05 55 67 75	Serbia and Montenegro	
Greece (Toll-Free within Greece)	801 11 22 55 47	HP General	+381 11 201 99 00
(World Wide)	+30 210 6 07 36 03	Spain	+34 902 32 11 23
Hungary	+36 1 382 11 11	Sweden	+46 86 19 21 70
Ireland	+353 1 615 82 14	Switzerland	
Israel	+972 9 830 48 48	HP (for End Customer – Presales)	+41 848 88 44 66
Italy		Presales & support	+41 848 80 11 11
Personal computer, Server Intel & Peripherals	+39 02 92607 330	Tunisia	+216 71 89 33 91
Server & workstation UNIX, Storage, OpenView	+39 02 92607 322	Turkey	+90 216 579 71 71
Kazakhstan and Kyrgyzstan		United Kingdom	+44 84 52 70 42 22
HP General	+7 3272 58 43 43	Ukraine	+380 44 490 61 20

Need fast answers to your technical-support questions? The HP Business Support Centre (HP BSC) portal is for you!
Now you can improve the productivity of your IT with one-stop access to the information and tools you need to support your personal computing and printing products.

Throughout the product lifecycle, from initial setup and day-to-day usage, through to troubleshooting and upgrades, you can obtain fast, effective answers to your technical-support questions in just a few clicks. Next time you have a query, visit the HP BSC portal at **www.hp.com/bizsupport**

For more information about HP workstations and related products, services and solutions, please visit our website: www.hp.com/uk/workstations

5983-0030EEE. January 2005