

# HP Workstation xw8200

Top-of-the-line dual processing Personal Workstation



## Featuring

<b>Processor</b>	One or two Intel® Xeon™ processors with 800 MHz Front Side Bus
<b>Chipset</b>	Intel E7525
<b>Special features</b>	Up to 16 GB of Registered ECC DDR2-400 SDRAM memory Processor speeds up to 3.6 GHz with 1 MB L2 cache Intel Extended Memory 64 Technology Highly expandable Range of professional PCI-Express 3D OpenGL-certified and multi-display 2D graphics offerings HP Performance Tuning Framework Intelligently designed tool-less chassis

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## Executive summary

The HP Workstation xw8200 is ideal for digital artists, designers, engineers and scientists who have digital content, designs, analyses and research to visualize completely, quickly and reliably. Meeting the customers' combined need for computational and visualization power, I/O performance, expandability, reliability and support, the HP xw8200 delivers top-of-the-line dual-processing design power in a personal workstation. HP's Performance Tuning Framework, our close collaborative relationship with Independent Software Vendors, support of multiple operating systems, extensive manageability tools, and multiple security options make the HP xw8200 easy to own and use.

## What's special about this product?

Combine revolutionary processing and I/O power from Intel, the latest graphics technology from leading graphics providers with HP's reliability, support and technical expertise. The result is the HP Workstation xw8200 - a personal workstation that is engineered to satisfy your insatiable demand for performance and expandability.

- **The highest performance Intel technology available on a personal workstation:** Intel's E7525 next generation, high-end performance chipset for Intel Xeon™ processors supports dual-processing, an 800 MHz system bus (6.4 GB/sec bandwidth) and a dual channel PC3200 DDR2-400 SDRAM memory subsystem. New Intel Xeon processors have 1MB L2 cache putting increased power and efficiency behind demanding applications.
- **Intel Extended Memory 64 Technology:** Accommodate today's and tomorrow's application demands with Intel EM64T 64-bit extension technology. Intel EM64T expands addressable memory space to 256TB aiding in the design and manipulation of huge data sets or models. This new technology should provide an easy transition path from 32-bit to 64-bit computing enabling 32-bit applications to run at full performance on architecture also capable of supporting 64-bit operating systems and applications. HP has 20+ years of developing both 64-bit systems and operating systems.
- **PCI Express (x16) graphics:** This new graphics interface provides four-times the total peak-bandwidth and two-times the unidirectional bandwidth of AGP 8X graphics.
- **PCI Express (x4) I/O:** The next generation of I/O interface increases bandwidth to 1GB/s (unidirectional) and 2 GB/s (peak). With dedicated, point-to-point interface, cards plugging into the interface are not sharing data bandwidth with other cards.
- **Memory expandability:** Large memory configurations can be built to handle massive and complex data sets.
- **Intelligently designed chassis:** The tool-less chassis design eases servicing, upgrading and maintenance.

- **Vibration isolation for better acoustics:** The HP xw8200 has acoustic dampening hard drive rails that minimize transmission of vibration from the hard drives into the chassis; so reducing system acoustics by up to 7dB, while protecting the hard drives from vibrations outside the system.
- **New, quiet circuitry:** The HP xw8200 reduces work environment noise with a new, quiet circuitry that allows the fans to run quieter at lower speeds when the system is idle or running low-power applications, while retaining the ability to accommodate high-power applications and configurations.
- **HP Performance Tuning Framework:** Only from HP, the Performance Tuning Framework enables IT professionals or individual users to more easily configure Intel Pentium 4 and Xeon™ based HP workstations for stability and best performance.

Today's workstations are composed of an infinite number of combinations of hardware and software components, operating systems, and applications. The enormous number of configuration possibilities can make system setup a difficult task. To reduce the complexities, systems were typically set up the same way regardless of individual user requirements. The HP Performance Tuning Framework guides system setup, allowing a "custom" configuration that best matches the workstation to the user's requirements. Thus, you have the latest graphics drivers that allow you to push past some application memory restraints. These benefits can help save both time and money and increase overall productivity.

- **Intel Hyper-Threading Technology:** Hyper-Threading presents each Xeon processor to Microsoft Windows XP and Linux as two virtual processors that can work on two sets of chores simultaneously by enabling the processor to utilize its execution resources more efficiently. Technology benefits include:
  - support for multi-threaded code and multi-tasking operations through better utilization of processor resources
  - multiple threads/tasks running simultaneously to increase the number of transactions that can be executed
  - improved user reaction and response times

## Standard features

The HP Workstation xw8200 delivers the following workstation features.

**Table 1.** HP Workstation xw8200 features

<b>Form factor</b>	Rackable minitower
<b>Operating systems</b>	Preinstalled Microsoft® Windows® XP Professional; Supported Microsoft Windows 2000 Professional Preinstalled Red Hat Enterprise Linux WS3*, or HP Installer Kit for Linux <i>*available August, 2004</i>
<b>Processor</b>	One or two Intel Xeon processor(s) at 2.8, 3.2, 3.4 and 3.6 GHz with 1MB L2 cache with Hyper-Threading
<b>Front Side Bus</b>	800 MHz
<b>Chipset</b>	Intel E7525
<b>Memory</b>	Up to 16 GB* of Registered ECC DDR-2 400 MHz SDRAM (8 DIMMs in 4 pairs, dual-channel architecture) <i>* requires 2 GB DIMMs, available in October 2004.</i>
<b>Expansion bays</b>	3 external 5.25 inch bays (1 used for optional floppy), 5 internal 3.5-inch bays
<b>Drive controllers</b>	Integrated dual channel SATA/150 controller with RAID (0 or 1) capability, integrated dual channel Ultra320 SCSI controller with RAID (0 or 1) capability, optional 4 channel SATA controller with RAID (0 or 1) capability, optional single channel Ultra320 SCSI controller with RAID (0, 1, 01, 5) capability

<b>Hard drive(s)</b>	40, 80, 160, 250, 300* GB SATA/150 (7200 rpm); 36, 74 GB SATA/150 (10,000 rpm); 73, 300* GB (10K rpm) Ultra320 SCSI; or 36, 73, 146* GB (15K rpm) Ultra320 SCSI  <i>*300 GB SATA and 300 GB (10k rpm) and 146 GB (15k rpm) Ultra 320 SCSI devices available September, 2004</i>
<b>Removable media</b>	48X CD-ROM, 48X CD-RW, 16X DVD-ROM, 48X CD-RW/DVD combo, 8X DVD+RW
<b>Expansion slots</b>	7 slots: 1 PCI Express (x16) Graphics slot, 1 PCI Express (x8 mechanical, x4 electrical), 1 PCI-X (133MHz) slot, 2 PCI-X (100 MHz) slots, and 2 legacy PCI slots
<b>Graphics</b>	Professional 2D:               NVIDIA NVS 280 (PCI) NVIDIA NVS 280 (PCI-E) Entry 3D:                        NVIDIA Quadro FX 330(PCI-E) ATI FireGL V3100 (PCI-E) Mid-range 3D:                 NVIDIA Quadro FX 1300 (PCI-E) ATI FireGL V5100 (PCI-E)* High-end 3D:                 NVIDIA Quadro FX 3400 (PCI-E)**  <i>* Available September, 2004</i> <i>**Available August, 2004</i>
<b>HP Performance Tuning Framework</b>	HP Performance Tuning Framework will guide your system setup, allowing a "custom" configuration that best matches the workstation to user requirements. This customization ensures availability of the graphics drivers and removes some memory restraints. For specific application support and download instructions, go to: <a href="http://www.hp.com/go/framework">www.hp.com/go/framework</a>
<b>Audio</b>	Integrated AC'97/16-bit stereo full-duplex, optional SoundBlaster Audigy 2-ZS PCI
<b>I/O ports and connectors</b>	Front: headphone, microphone, and 2 USB 2.0, 1 IEEE 1394 Rear: 6 USB, 1 standard serial ports, 1 parallel port, PS/2 keyboard and mouse, 1 RJ-45, 1 audio in, 1 audio out, 1 mic in, IEEE 1394
<b>Communications</b>	Integrated Intel Pro MT 10/100/1000 LAN, optional Intel Pro MT PCI NIC, optional Intel Pro XT PCI-X NIC, optional Broadcom Gbit PC NIC
<b>Power supply</b>	600 W
<b>Input devices</b>	USB or PS/2 keyboard; choice of 2-button scroll mouse (optical or mechanical); 3-button mouse (optical or mechanical)
<b>Dimensions (h x w x d)</b>	45.5 cm (17.9 inches) x 21.0 cm (8.3 inches) x 52.5 cm (20.7 inches)
<b>Weight</b>	Minimum configuration: 19 kg (42 lbs) Maximum configuration: 24 kg (54 lbs)
<b>Monitors</b>	HP P1230 22-inch CRT, HP L1925 19-inch flat panel, HP L2035 20.1-inch flat panel, HP L2335 23-inch flat panel
<b>Security</b>	Standard: side cover key lock, USB ports that can be deactivated, padlock loop, Kensington lock provision, chassis intrusion sensor
<b>Environmental</b>	Energy Star compliant (factory set-up optional)*  <i>*available in August 2004</i>
<b>Warranty</b>	Parts, labor, and onsite service (3-3-3 worldwide); 24 x 7 telephone support; terms and conditions may vary, certain restrictions apply

# The HP Workstation xw8200 details

The best reason to buy an HP workstation is to improve your productivity. HP brings many years of workstation experience to the table. When we engineer our HP workstations, we focus on:

- Performance—delivering excellent computational and visualization performance.
- Testing and certification—ensuring a reliable, stable system.
- Graphics—often the defining factor of a system, our graphics experience brings fast, stable graphics to your work environment.
- Choice of operating systems— Microsoft Windows XP, Red Hat Enterprise Linux WS3 and HP Installer Kit for Linux are available.
- Peace of mind—unparalleled service and support.

## Application certifications

HP works closely with the leading software application providers to ensure that their applications are tested and certified on HP workstations. Without certification, applications can perform unpredictably or not at all. Our relationships with top ISVs enable close collaboration, performance tuning, and hardware platform certification to help ensure compatibility, reliability and the best application performance possible on HP workstations.

**Table 2.** Primary hardware and applications certifications planned for the HP Workstation xw8200 in the DCC market segment

Partner	Product	Operating system	Current status
Adobe	After Effects	Windows XP Professional	In testing
Adobe	Premiere Pro	Windows XP Professional	In testing
Alias	Maya	Windows XP Professional	In testing
Alias	Maya	Linux	In testing
Avid	Adrenaline Media Composer	Windows XP Professional	In testing
Avid	DS Nitris	Windows XP Professional	In testing
Avid	Xpress Pro	Windows XP Professional	In testing
Canopus	DV Storm 2	Windows XP Professional	In testing
Discreet	3DS Max	Windows XP Professional	In testing
Macromedia	Director	Windows XP Professional	In testing
Matrox	Disiguite Family	Windows XP Professional	In testing
Matrox	RT.X100	Windows XP Professional	In testing
Pinnacle	Liquid Chrome	Windows XP Professional	In testing
SOFTIMAGE	3D	Windows XP Professional	In testing
SOFTIMAGE	XSI	Windows XP Professional	In testing
SOFTIMAGE	XSI	Linux	In testing

**Table 3.** Primary hardware and applications certifications planned for the HP Workstation xw8200 in the MCAD market segment

Partner	Product	Revision	Operating system	Current status
Alias	Studio		Windows XP Professional	In testing
AutoDesk	AutoCAD	2004	Windows XP Professional	In testing
AutoDesk	Inventor	7, 8	Windows XP Professional	In testing
Dassault Systemes S.A.	CATIA	5	Windows XP Professional	In testing
Dassault Systemes S.A.	SolidWorks		Windows XP Professional	In testing
PTC	Pro/Engineer, Mechanica	Wildfire, Wildfire2	Windows XP Professional	In testing
UGS	I-DEAS	10NX, 11NX	Windows XP Professional	In testing
UGS	Solid Edge	14, 15	Windows XP Professional	In testing
UGS	Unigraphics	NX1, NX2	Windows XP Professional	In testing

**Table 4.** The primary hardware and applications certified on the HP Workstation xw8200 in the CAE market segments are:

CAE	Ansys Fluent MSC Nastran/Patran
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HP has worked with major ISVs to port their applications to Linux. You can now find many of the key applications fully ported, optimized and supported on Linux.

## HP's Application Competency Centers

HP's Application Competency Centers are virtual teams consisting of HP software engineers on-site at key application providers and at key HP application focused technology centers. The complete workstation solution competency team also includes engineers at the top component suppliers like Intel, NVIDIA, ATI, Microsoft, Red Hat and others. The on-site HP Application Competency engineers lead these virtual teams to ensure the best overall solution is delivered for the customer.

HP Application Competency Centers are dedicated to providing the best overall solution through:

- Software certification plus advanced regression testing to assure the best problem prevention quality
- Optimizing performance via combined tuning of the application and workstation hardware platform
- Dedicated customer support
- Development of recommended workstation configurations

For additional information on HP Application Competency Centers, go to:

<http://www.hp.com/workstations/segments/competency.html>

## HP Performance Tuning Framework

Today's workstations are composed of an infinite number of combinations of hardware and software components, operating systems, and applications. System setup is a very difficult task, given the enormous number of configuration

possibilities. To reduce complexities, systems are frequently set up without considering the specific needs of the individual user.

HP Performance Tuning Framework, downloadable at no charge, enables the most favorable configuration of Intel Pentium® 4/Xeon-based HP workstations delivering stability and best performance. The Framework will guide your system setup, allowing a “custom” configuration that best matches the workstation to user requirements. This customization facilitates availability of the latest graphics cards and drivers and removes some memory restraints.

The Framework’s extensible design permits new configuration functionality and application support to be easily integrated over time. To facilitate the delivery of such new features, the Framework automatically updates itself when newer versions become available.

HP Performance Tuning Framework can help save both time and money and increase overall productivity.

The Framework is currently supported on Intel Pentium 4/Xeon-based HP workstations running either Microsoft Windows 2000 Professional or Windows XP Professional. Today, the HP Performance Tuning Framework supports Autodesk Inventor (8, 7, and 6), UGS Unigraphics 18, NX1 and NX2), 3D Studio Max, CATIA V5, Pro/ENGINEER (2001 and Wildfire), IDEAS (9 and 10), SolidWorks (2003 and 2004) and, coming soon, AutoCAD, Solid Edge, Avid, SOFTIMAGE.

For more information and to download the HP Performance Tuning Framework, go to: [www.hp.com/go/framework](http://www.hp.com/go/framework)

## HP Leadership Graphics Program

Availability and performance of professional graphics will probably be a key factor in your workstation decision. Under our Leadership Graphics Program, HP workstations provide the fastest access to the best graphics in the industry at varying performance and price points. HP has over 20 years of graphics development experience, and our close working relationship with the leading graphics card vendors in the industry allows our workstations to avoid problems with unsupported graphics cards and systems.

**Table 5.** Available graphics cards

Graphics segment	Integrated cards available for HP Workstation xw8200
Professional 2D	NVIDIA NVS 280 (PCI) NVIDIA NVS 280 (PCI-E)
Entry 3D	NVIDIA Quadro FX 330 (PCI-E) ATI FireGL V3100 (PCI-E)
Midrange 3D	NVIDIA Quadro FX 1300 (PCI-E) ATI FireGL V5100 (PCI-E)*
High-end 3D	NVIDIA Quadro FX 3400 (PCI-E)**

\* Available September, 2004

\*\* Available August, 2004

## Choice of operating systems

HP gives you choices. The HP xw8200 will come with your choice of preinstalled Microsoft Windows XP Professional, Red Hat Enterprise Linux WS3\* or the HP Installer Kit for Linux. The HP xw8200 will support Microsoft Windows 2000 Professional with all necessary drivers available on our support website.

Linux on the HP Workstation xw8200 will not only be available preinstalled, but preconfigured and integrated allowing for instant, out-of-the-box productivity. Your first level of quality support will be directly from HP from people who know the Linux operating system, graphics and applications. HP has worked with major ISVs to port their applications across to Linux. You can now find many of the key applications fully ported, optimized and supported on Linux.

By popular demand, HP offers the HP Installer Kit for Linux. This new Red Hat Linux enabler kit will ease Linux installation and provide the flexibility to create the custom OS images that our customers requested while maintaining HP as a single point of support.

HP Installer Kit for Linux: a media/installer kit that provides several disks to help the installation of various Linux operating systems

- HP Driver CD for Red Hat Enterprise WS3 Box Set (32-bit or 64-bit)\*\*
- HP Installation Kit for Red Hat Enterprise version WS3 Update 1

\* Available August, 2004

\*\*Customer purchases desired Box Set/CDs directly from Red Hat or HP.

## Security solutions

HP offers a host of standard and optional security solutions to help protect your workstation investment. The HP Workstation xw8200 comes standard with a chassis key lock and USB ports that can be deactivated. In addition, HP offers the following security solutions:

- **Kensington Lock provision:** Designed to fit into the Kensington security slot
- **Chassis Clamp Lock:** Physically locks the chassis cover with a key
- **Chassis Intrusion Sensor:** Senses chassis opening and sends notice to user on boot or system administrator with manageability software
- **Smart keyboard:** Uses smartcard technology to prevent unauthorized access to PC and network; secures online transactions using digital signatures and certificates
- **USB port disable:** Provides the ability via the BIOS settings to disable all USB ports (front & back or front only).

## Display products and add-on options

HP offers several monitors that offer the high performance that you demand with the pricing choices that you need. Each is extensively tested for compatibility with HP Workstations. They include:

- **HP P1230 22-inch CRT:** The HP CRT Monitor P1230 offers quality precision imaging for a broad range of workstation users. This technologically advanced flat-screen 22-inch CRT uses award-winning Diamondtron Natural Flat (NF) technology to provide one of the sharpest pictures available while reducing glare and minimizing image distortion.
- **HP L1925 19-inch flat panel:** The HP Flat Panel Monitor L1925 is a competitively-priced, high-performance 19-inch flat panel monitor that is well-suited as a CRT replacement for business users.
- **HP L2035 20.1-inch flat panel:** The HP Flat Panel Monitor L2035 is a high-performance 20-inch flat panel monitor designed for high-performance business and workstation users. It features high-end panel technology,



Picture-in-Picture capability, composite and s-video inputs.

- **HP L2335 23-inch flat panel:** Exceptional quality in an extra-large 23-inch 16 x 9 aspect ratio flat panel display.

## Manageability solutions

HP Client Management Solutions help you simplify management of your workstations and reduce total ownership costs. These solutions share a common design and are highly integrated due to the extensive work between HP and its partner Altiris, a leading provider of manageability solutions. HP Client Manager Software (downloadable from the web) allows you to centrally track, monitor and manage the hardware aspects of HP client systems on your network:

- Get valuable hardware information such as CPU, memory, video, and security settings
- Monitor system health to fix problems before they occur
- Install drivers and BIOS updates without visiting each workstation
- Remotely configure BIOS and security settings
- Automate processes to quickly resolve hardware problems
- Local recovery

Additional Altiris solutions are available to address workstation management challenges through the entire IT lifecycle including:

- Inventory assessment
- Software license compliance
- Personality migration
- Software image deployment
- Software distribution
- Asset management
- Application metering
- Client backup and recovery
- Problem resolution

Visit <http://www.hp.com/go/easydeploy> for more information, to download HP Client Manager Software, and to evaluate the Altiris solutions.

## Service and support

In the U.S., the HP Workstation xw8200 comes with a full three-year warranty against defects in materials and workmanship (three years of phone-in hardware support, parts, labor, and next-day, on-site response). Response time for HP on-site service in an HP service travel area is normally next business day (excluding HP holidays).

The system processor unit, keyboard, mouse, and HP accessories inside the system processor unit are covered by this warranty—including video adapters, mass storage devices, and interface controllers. HP workstation products external to the system processor unit, such as external storage subsystems, displays, printers, and other peripherals, are covered by the applicable warranties for these products. HP software is covered by the HP Software Product Limited Warranty. Technical information is available at [www.hp.com](http://www.hp.com).

The warranty for each HP Workstation xw8200 includes hardware phone-in support, available during the warranty period, starting from the date of purchase. Also included is basic technical phone-in assistance for workstation configuration and setup as well as for the pre-loaded operating system.

Warranty terms may vary by country. Authorized HP dealers or any HP sales and service office can provide details. To obtain phone-in assistance or onsite service during the warranty period, contact an HP sales and service office.

Worldwide, refer to [www.hp.com/cpsosupport/guide/psd/expectations.html](http://www.hp.com/cpsosupport/guide/psd/expectations.html). In the United States and Canada, please call the HP Customer Support Center at (970) 635-1000 or a participating authorized HP Personal Computer Dealer Repair Center.

## The HP advantage

The HP Workstation xw8200 offers more than incredibly low-cost, high-performance computing. It also brings all the advantages of doing business with HP.

### HP quality and reliability

HP workstations are designed with the needs of the professional user in mind. They offer you peace of mind because they are engineered to be a highly reliable, cost-effective means to meet your time-to-market needs. Known for their proven reliability, maintainability, and longevity, HP workstations are tested extensively from component level to finished product. HP systematically pushes its products past reasonable limits to make sure they will perform reliably even in the most demanding environments.

HP quality does not stop at the factory door. Our service and engineering teams continue to support every workstation throughout its life. HP's strong market share reflects a global awareness and strong customer loyalty to HP's full line of innovative and competitively priced products. Our world-famous quality and reliability extend to all of our products, helping reduce maintenance, repair, and support costs throughout the product's lifecycle and providing a high residual value for HP products.

### HP Financial Services

HP Financial Services (HPFS) help customers acquire the IT solutions they need to be competitive while freeing them to use capital for running and growing their businesses.

Our customized approach delivers more of what CIOs and CFOs demand—greater business agility, IT costs aligned with business results, and better return on IT investment. HPFS is known for our consultative approach, exceptional flexibility, and globally seamless service delivery. HPFS delivers:

- Customized leasing and financing solutions
- Smooth, cost-effective transitions to new solutions
- Technology refreshes
- Consistent global service delivery in 51 countries
- Financial asset management

## Achieve your goals

Designed with a strong history of engineering expertise, the HP Workstation xw8200 gives you the performance to achieve your goals. Powerful, accurate graphics range from robust 2D to 3D OpenGL. Available with certified and tuned solutions, financing options, and flexible support and services at an unprecedented price, the HP Workstation xw8200 is easy to buy, deploy, and maintain—allowing you to focus on your work.

Contact an HP account manager or reseller for more product details and availability information.

## For more information

For more information about HP workstations or solutions, and related technologies, visit the following locations online:

<b>HP Home Page</b>	<a href="http://www.hp.com">www.hp.com</a>
<b>HP Workstations</b>	<a href="http://www.hp.com/workstations">www.hp.com/workstations</a>
<b>HP Leadership Graphics Program</b>	<a href="http://www.hp.com/go/leadershipgraphicsprogram">www.hp.com/go/leadershipgraphicsprogram</a>
<b>Intel processors</b>	<a href="http://www.intel.com">www.intel.com</a>
<b>DCC market information</b>	<a href="http://www.hp.com/technicalsolutions/dcc/index.html">www.hp.com/technicalsolutions/dcc/index.html</a>
<b>MCAD/CAE market information</b>	<a href="http://www.hp.com/technicalsolutions/pdd/mcad/solutions.html">www.hp.com/technicalsolutions/pdd/mcad/solutions.html</a>
<b>ATI</b>	<a href="http://www.ati.com">www.ati.com</a>
<b>NVIDIA graphics</b>	<a href="http://www.nvidia.com">www.nvidia.com</a>
<b>Enterprise Business Center</b>	<a href="http://welcome.hp.com/country/us/eng/solutions/business.html">welcome.hp.com/country/us/eng/solutions/business.html</a>
<b>Small and Medium Business Center</b>	<a href="http://welcome.hp.com/country/us/eng/solutions/smb.html">welcome.hp.com/country/us/eng/solutions/smb.html</a>
<b>HP support</b>	<a href="http://thenew.hp.com/country/us/eng/support.html">thenew.hp.com/country/us/eng/support.html</a>

To learn more, visit [www.hp.com/go/workstations](http://www.hp.com/go/workstations)

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