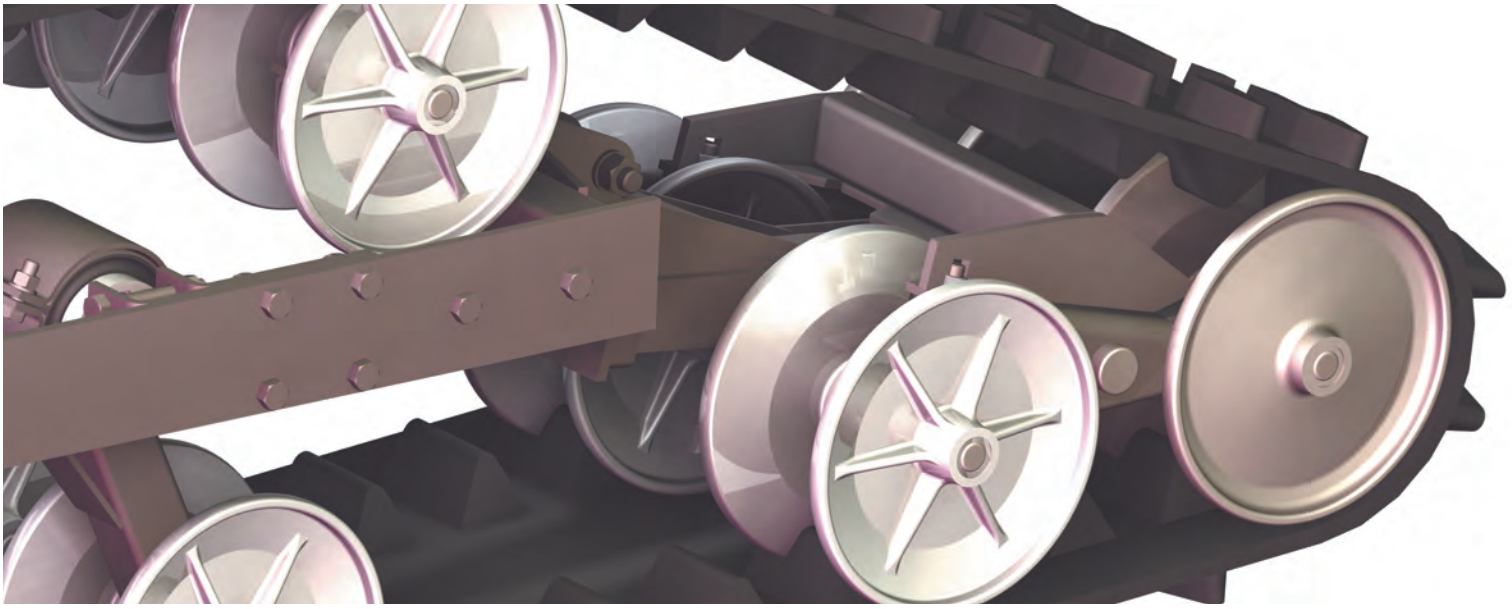
HP AND SOLIDWORKS



SOLIDWORKS

"Because of our strong partnership, our customers will be well served by selecting HP as their computing platform. Not only are HP workstations thoroughly tested and certified to provide the utmost in performance and reliability for SolidWorks, but the HP Performance Tuning Framework quickly provides key system information necessary when contacting SolidWorks support."
Efrat Ravid, Director, Marketing & Alliances, SolidWorks

SolidWorks Corporation maintains an unyielding focus on mechanical design and sets the global standard for 3D CAD software. The company helps organizations reduce time to market, design better quality products faster and maintain a competitive advantage by delivering powerful 3D design capabilities at an affordable cost. SolidWorks Corporation continually develops product innovations and features to stay in step with customer needs and deliver the enhancements to meet those needs.

SolidWorks® software
The company's flagship product is SolidWorks, the world's leading 3D CAD software. Innovative, yet proven, SolidWorks offers excellent performance and time-saving capabilities, allowing engineers and designers to get more done faster and more accurately. Consider these features:

- Specialized built-in design tools
- Unique productivity enhancements for designers of machinery, consumer products and molds
- 2D-to-3D transition tools
- 3D models from existing 2D data with the best available transition tools

Design communication
Enjoy unmatched design communication capabilities, including eDrawings®, an email-enabled communication tool that makes it easy to share product design information.

RealView
The most realistic real-time rendering capability available within a 3D mechanical design system.

Surfacing
Generate complex surfaces using lofts and sweeps with guide curves, fill-in holes and drag-handles for easy tangency control.

HP WORKSTATIONS

HP Personal Workstations feature advanced technologies, world-class design and extensive options so you can build a solution that better suits your needs, while maximizing productivity and value—not to mention helping meet deadlines. From the HP xw4400 to the HP xw9400, HP workstations are tested and finely tuned for SolidWorks® software, allowing you to choose a workstation to work the way you want and need.

HP xw4400 Workstation
The HP xw4400 offers extreme performance at a PC-like price, making it ideal for mainstream SolidWorks engineers and flexible company-wide deployment. This entry workstation features Intel® Core™ 2 Duo[iii] Processors and supports a wide range of professional graphics, memory and storage choices and quad-core computing. The HP xw4400 also features dual-channel DDR2-667 MHz memory and PCIe x16 graphics while its price and performance make it an excellent value.

HP xw6400 Workstation
The HP xw6400 is the choice for the power user who needs dual-processor, dual-core[iii] technology but has limited desk space, needs to maximize power efficiency and values very quiet operation. The HP xw6400 offers new Dual-Core[iii] Intel Xeon® Processors, supports up to eight monitors, a 4 channel 667 MHz Fully Buffered DIMM (FBDIMM) memory subsystem and four PCI Express (PCIe) I/O slots to handle large and complex data sets. The HP xw6400 also supports quad-core computing.

HP xw8400 Workstation
The HP xw8400 is an undeniable force, featuring top-of-the-line Intel Xeon dual-processor, dual-core[iii] performance for excellent design and engineering power. Our highest-performing Intel Xeon Processor-based workstation is the choice for engineers who work with demanding computational and visualization applications. The HP xw8400 offers a full range of professional graphics, 64-bit architecture, 8 slots for memory expansion, and supports quad-core computing.

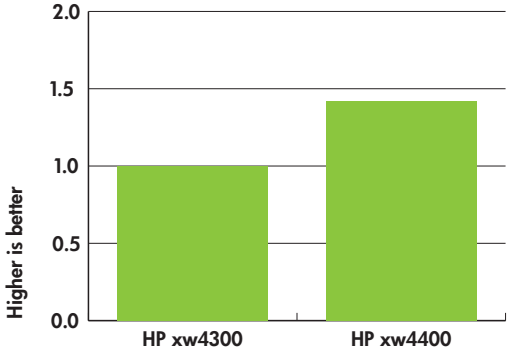
HP recommends Windows® XP Professional

HP XW4400 WORKSTATION PERFORMS BETTER

The HP xw4400 performs basic tasks in SolidWorks up to 42% faster than the HP xw4300.

HP xw4400 Workstation
Intel Core 2 Duo[iii]
2.9 GHz[vi]
Genuine Windows XP Professional
NVIDIA Quadro FX 4500

HP xw4300 Workstation
Intel Pentium 4 Processor
3.8 GHz[vi]
Genuine Windows XP Professional
NVIDIA Quadro FX 4500



Source: HP Workstation Technical Consulting Lab

HP RECOMMENDED CONFIGURATIONS FOR SOLIDWORKS

STANDARD USER	ADVANCED USER	POWER USER
CERTIFIED FOR SOLIDWORKS	CERTIFIED FOR SOLIDWORKS	CERTIFIED FOR SOLIDWORKS
HP xw4400 Workstation	**HP xw6400 Workstation**	**HP xw8400 Workstation**
Genuine Windows XP Professional x64 Edition	Genuine Windows XP Professional x64 Edition	Genuine Windows XP Professional x64 Edition
Intel Core 2 Duo[iii] Processor 2.93 GHz[vi] 1066 FSB[v]	Dual-core[iii] Intel Xeon Processor 5100[ii] 3.0 GHz[vi] 1066 FSB[v]	(2) Dual-core[iii] Intel Xeon Processor 5100[ii] 3.0 GHz[vi] 1333 FSB[v]
Windows Vista™ Capable[xi]	Windows Vista Capable[xi]	Windows Vista Capable[xi]
Intel 975X Express chipset	Intel 5000X chipset	Intel 5000X chipset
4 GB DDR2-677 ECC	4 GB DDR2-677 ECC	6 GB DDR-2 667 ECC
NVIDIA Quadro FX 1500	ATI FireGL 7200 Graphics	NVIDIA Quadro FX 4500
HP LP2335 23-inch flat panel monitor	(2) HP LP2335 23-inch flat panel monitors	(2) HP L2335 23-inch Flat Panel Monitors
160 GB[iv] SATA 3 Gb/s	(2) 73 GB[iv] Ultra320 SCSI hard drives	(2) 146 GB[iv] Ultra320 SCSI hard drives
48x CD-RW/DVD-ROM Combo[xii]	16X DVD±R/RW DL LightScribe Drive[viii]	16X DVD±R/RW DL LightScribe Drive[viii]
HP Performance Tuning Framework	HP Performance Tuning Framework	HP SpacePilot
HP Scroll Mouse	HP SpacePilot	3-year warranty
HP SpacePilot	3–year warranty	
3–year warranty		

HP recommends Windows XP Professional

HP xw9400 Workstation

There is powerful, and then there is the HP xw9400, which delivers uncompromised graphics performance and maximum expandability with AMD64[x]. The HP xw9400 supports up to four 3D graphics displays, dual PCIe x16 graphics and Dual-Core[iii] AMD Opteron™ Processors to meet the combined needs for computational power and visualization power and I/O performance to help lower the total cost of ownership. Excellent choice for high-performance graphics solutions such as parallel rendering or compositing.

HP Compaq nw9440 Mobile Workstation

The concept simple: workstation power where and when you need it. And the HP nw9440 delivers, providing workstation-caliber performance, powerful graphics and a 17-inch widescreen display all starting at just 7.4 pounds[i]. The HP nw9440, like its desktop peers, is certified for SolidWorks applications. It also features Intel Core Duo[iii] Processors, HP ProtectTools, a full-size keyboard and NVIDIA Quadro FX 1500 graphics controller with 256 MB of GDDR III video memory.

HP Recommended Configurations for SolidWorks

MOBILITY

APPLICATION CERTIFIED

HP Compaq nw9440 Mobile Workstation
Genuine Windows XP Professional
Windows Vista Capable[xi]
Intel Core Duo[iii] Processor T2600[ii]
- 2.1 GHz[vi]
- 667 MHz FSB[v]
- 2 MB L2 cache

Windows Vista Capable[xi]
17-inch WUXGA display
NVIDIA Quadro FX 1500M graphics
256 GDDR III video memory
80 GB[iv] UATA hard drive
2 GB DDR2-667
16X DVD±R/RW DL LightScribe Drive[viii]
7.5 pounds[i]
HP Performance Tuning Framework

POWER USER (AMD)

APPLICATION CERTIFIED

HP xw9400 Workstation
Genuine Windows XP Professional x64 Edition
(2) Dual-Core[iii] AMD Opteron Processor 2220SE[ix]
- 2.8 GHz[vi]
- AMD64 Technology[v]
- 1 GHz AMD HyperTransport™ technology[v]

Windows Vista Capable[xi]
8 GB DDR2-667 ECC
(2) 300 GB[iv] SAS drives
48x CD-RW/DVD-ROM Combo[xii]
NVIDIA Quadro FX5500
HP LP2465 24-inch flat panel monitor
HP Performance Tuning Framework
HP SpacePilot

HP Compaq nw8440 Mobile Workstation

Like the HP nw9440, the HP nw8440 delivers go anywhere workstation performance, but is designed for those seeking an entry mobile workstation. The HP nw8440 offers a 15.4-inch widescreen display, an Intel Core Duo[iii] Processor, HP ProtectTools, ATI Mobility FireGL V5200 graphics with 256 MB, dedicated video memory, and starts at just 5.95 pounds[i].

Innovative Design

Remember, all HP workstations feature innovative designs to reduce noise—our workstations are almost whisper quiet—while the industry-leading, tool-less chassis makes them easy to service, upgrade and maintain. After all, a little less stress at work is a very good thing.

Make your worklife easier.

HP Application Competency Center

A key piece of the HP and SolidWorks relationship is the Application Competency Center. HP engineers conduct extensive testing to validate entire solutions—hardware, operating system, application and graphics—that are optimized to run specific SolidWorks solutions. A focus on partnership and unprecedented collaboration with SolidWorks provides customers with reliable, easy-to-own solutions and breakthrough technology. SolidWorks even uses HP workstations to write, develop and test its software applications—one more reason you can be confident when choosing HP.

HP Remote Graphics Software

HP Remote Graphics Software (RGS) is an advanced utility that allows you to remotely access and share your workstation desktop and all its applications across large distances, providing you with a "just like local" experience.[vii]

Underlying HP RGS is the innovative HP compression technology, which makes remote access to workstations and their 3D graphics power a reality. Performance and image quality are outstanding, while network usage is kept at a minimum. With HP RGS you can:

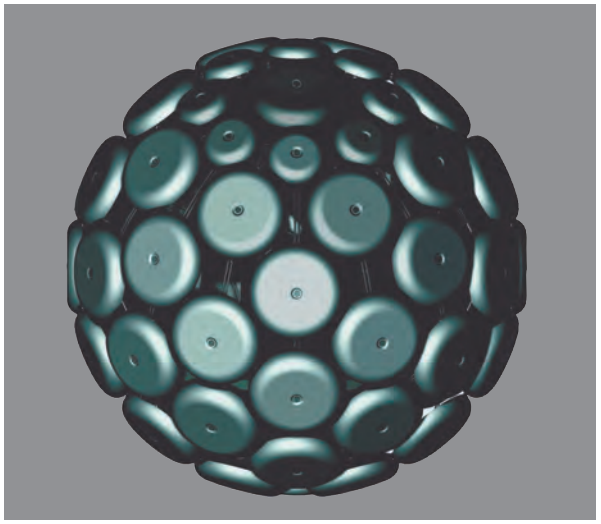
- Remotely access workstations with professional 3D graphics
- Access applications on different platforms such as Windows, Linux® and HP-UX
- Perform multi-user remote collaborations by sharing desktops
- Centralize workstation resources close to data centers for higher security and faster data access

HP Performance Tuning Framework
This exclusive HP tool—pre-installed on all HP Personal Workstations—makes it a snap to configure and update HP workstations, improving stability and performance. HP Performance Tuning Framework (PTF) has many features to help you work faster and more productively, while reducing hassles. For example, HP PTF can:

- Provide a detailed configuration report so you can easily find out what is on your system, helping you create a "custom" configuration that matches your requirements and even aid in support calls.
- Organize graphics driver certification information to help make informed decisions when loading the latest drivers.
- Track memory use and graphically display how your applications and processes use physical and virtual memory.
- Configure various performance, security and user-interface settings of Microsoft Windows XP.
- Obtain faster support from SolidWorks because their support staff is trained on HP PTF.

But that is not all. HP PTF offers various other operating system tuning controls and application specific features. And did we mention, it's free?

HP SpacePilot
The HP SpacePilot motion controller complements a traditional mouse to deliver the advantages of two-handed CAD to SolidWorks software users, including decreased repetitive mouse movements and shorter



design times. Users can easily change the center of rotation, quickly pan and zoom and rapidly animate assemblies. Essentially, the HP SpacePilot allows you to work faster with less movement.

Go SolidWorks website
HP maintains a special website dedicated to users of SolidWorks applications at www.hp.com/go/solidworks. This website offers special links to productivity enhancing tools, the latest recommended configurations to support SolidWorks and other information to make it easier for engineers to use SolidWorks applications on HP workstations.

HP WORKSTATION OR PC? FOR MCAD, THE ANSWER IS EASY.

Engineering and design professionals require the highest performing systems available to support their complex 2D and 3D applications. HP workstations offer advanced features that deliver more power, stability and dependability than standard PCs, and are specifically tested and certified for 2D and 3D applications

Application tested and certified
HP workstations are fully tested and certified for professional applications, including most CAD, CAE, AEC and GIS applications. With HP workstations, users get the highest desktop quality and reliability for their professional applications.

Enhanced processing power
HP workstations support processors such as the single or Dual-Core[iii] AMD Opteron, Intel Core 2 Duo[iii] and Dual-Core[iii] Intel Xeon processors. In certain configurations workstations can have up to eight processor cores in a single workstation enclosure. With HP workstations, users can get the maximum processing power designed into a desktop system.

More memory capability
HP workstations offer significantly more memory expandability than PCs, up to 8 GB in our entry models. Error checking and correction (ECC) memory (the fastest possible memory), offered only on workstations, provides protection against soft errors in the memory that could lead to process and application failures. All HP workstations offer ECC memory, providing the needed level of data integrity, reliability and greater system uptime required of CAD, CAE, AEC and GIS applications. HP high-end workstations also support registered DDR-SDRAM memory, which allows for more cost-effective large configurations and larger memory configurations. With HP workstations, users get the preferred memory choices.

Highest levels of performance
HP workstations use advanced Intel chipsets, such as the Intel 975X Express chipset, typically not offered on PCs, to deliver the highest possible performance. Using Intel Memory Pipeline Technology, these chipsets offer higher utilization of the memory channel to accelerate transfers between the processor and system memory, support for faster memory speeds, increased PCI graphics requirements, expanded I/O bandwidth, and the use of ECC memory. These chipsets also enable HP workstations to process larger data sets or models quicker and execute both 32- and 64-bit applications.

Professional Graphics and certification
Workstations use powerful professional level graphics cards typically not found in PCs. HP workstation engineers work collaboratively with software and graphics card vendors to test, thoroughly debug, certify and optimize specific graphics drivers for the complex 2D and 3D applications used by design and development teams. These drivers provide the maximum performance and highest quality support for the certified CAD, CAE, AEC or GIS application.

Fastest, most reliable disk selection
HP workstations offer more choices than PCs, including faster SATA drives and enterprise SAS drives; SCSI; and RAID levels 0,1,5,10 capability[xiii]. With HP workstations, users get greater disk performance and reliability.

FOR MORE INFORMATION ABOUT HP AND SOLIDWORKS SOLUTIONS, PLEASE VISIT WWW.HP.COM/GO/SOLIDWORKS.

WWW.HP.COM/GO/SOLIDWORKS

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www.hp.com

i Weight will vary by configuration.
ii Intel processor numbers are not a measurement of higher performance. Processor numbers differentiate features within each processor family, not across different processor families. See www.intel.com/products/processor_number for details.
iii Dual Core is a new technology designed to improve performance of multithreaded software products and hardware-aware multitasking operating systems and may require appropriate operating system software for full benefit; check with software provider to determine suitability. Not all customers or software applications will necessarily benefit from use of this technology.
iv 1 GB equals 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.
v Actual bus speed is less. Listed bus speed represents the equivalent effective throughput for data.
vi GHz refers to internal clock speed of the processor. Other factors beside clock speed may impact system and application performance.
vii Performance subject to network speed.
viii Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copy-right protected materials. Intended for creation and storage of your original material and other lawful uses. Double Layer discs can store more data than single layer discs. However, double-layer discs burned with this drive may not be compatible with many existing single-layer DVD drives and players. LightScribe creates a grayscale image similar to black and white photography. LightScribe media required and sold separately.
ix AMD's numbering is not a measurement of clock speed.
x 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 processor. Given the wide range of software applications available, performance of a system including a 64-bit operating system will vary.
xi Not all Windows Vista features are available for use on all Windows Vista capable PCs. All Windows Vista Capable PCs will run the core experiences of Windows Vista, such as innovations in organizing and finding information, security and reliability. Some features available in premium additions of Windows Vista—like the new Windows Aero user interface—require advanced or additional hardware. Check www.windowsvista.com/getreadyfordetails.
xii Actual speeds may vary.
xiii Hardware RAID is not supported on Linux Systems. The Linux kernal, with built-in software RAID, provides excellent functionality and performance. It is a good alternative to hardware-based RAID. Please visit http://h20000.ww2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux.

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