

HP and SolidWorks

HP desktop and mobile workstations deliver the performance, reliability, and application certifications you need to accelerate product development.



Accelerate product development with HP Workstations.

In product-development, you need to make the most of every design cycle. HP innovation helps you get there with high-performance desktop and mobile workstations built for the challenges of product design—from basic computer-aided design to complex simulation and analysis. You'll work with confidence knowing your HP Workstation is designed to deliver extreme reliability and is certified for many applications, including popular products for concept design, mechanical computer-aided design, computer-aided engineering, and computer-aided manufacturing. To help you stay productive, HP tests large numbers of applications and proactively resolves many software and hardware issues. And to keep your workspace uncluttered, HP offers the new HP Z1 Workstation in a space-saving all-in-one format.

When only the best will do.

HP Workstations are built for the unyielding demands of today's professional and technical workplaces. They are engineered to help your team work faster, work smarter, and gain a competitive edge. With bold designs, world-class engineering, robust management tools, and leading-edge visual collaboration solutions, HP Workstations take innovation, performance, and reliability to a new level.

HP and SolidWorks

HP resources and our relationships with Dassault Systèmes SolidWorks Corp. (3DS SolidWorks), graphics vendors, chip suppliers, and Microsoft provide a consistent application, operating system, hardware, and graphics technical direction. This results in broader, more dependable 3D application-oriented technology choices. HP and 3DS SolidWorks have a unique industry position and relationship that provides comprehensive solutions to the product development market.

Rigorous ISV Certifications



To ensure HP Workstations work as expected with SolidWorks applications, HP invests in resources, equipment, relationships, benchmark testing as well as SolidWorks certification. This level of HP effort means your investment in software and HP hardware is protected, with a commitment to the quality and support of the full solution. [Check your HP Workstation certification status for SolidWorks applications. >>](#)

Find more information on HP and SolidWorks
[Learn more](#)

HP Advantages for SolidWorks Customers

- Use What 3DS SolidWorks Uses** • 3DS SolidWorks uses HP Workstations and Mobile Workstations to develop, test, and demonstrate their applications.
- Protect Your Investment with HP Certification** • HP tests and submits HP Workstations to 3DS SolidWorks for certification and our equipment stays onsite for support. This protects your solution investment.
- Use HP Expert Knowledge** • HP application experts support customer issues, develop recommended configurations, run performance testing, and application performance analysis.
• HP Performance Advisor provides specific performance settings for individual applications.
• Learn more with [HP Tech Tips](#) and see how you can benefit from specific HP and partner technologies.
- Use HP Collaboration Tools** • HP Remote Graphics Software is specifically designed to remotely access your SolidWorks applications.

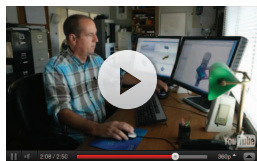
Dassault Systèmes 3DS SolidWorks Corp

DS SolidWorks focuses on all aspects of mechanical design by creating easy to use CAD, simulation, PDM, and documentation software. The company helps organizations reduce time to market, design better quality products faster, and maintain a competitive advantage by delivering powerful yet affordable and easy-to-use design solutions.

SolidWorks 3D CAD Software

The company's flagship product is SolidWorks, the world's leading 3D CAD software. With a history of innovation, SolidWorks software offers excellent performance and time-saving capabilities that allow engineers and designers to complete more work with greater accuracy. Its features include:

- Specialized, built-in design tools
- Unique productivity enhancements for designers of machinery, consumer products and molds
- 3D models from existing 2D data with the best available 3D adoption tools
- Functionality to design and detail large assemblies
- An easy-to-use interface, with intuitive display and control functions
- Tools to create 3D geometry in real-time



AMP'd Gear video
[Watch the video](#)

Design communication

DS SolidWorks provides SolidWorks Enterprise PDM, which allows distributed design teams to organize, share and manage product data.

RealView™

RealView is 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.

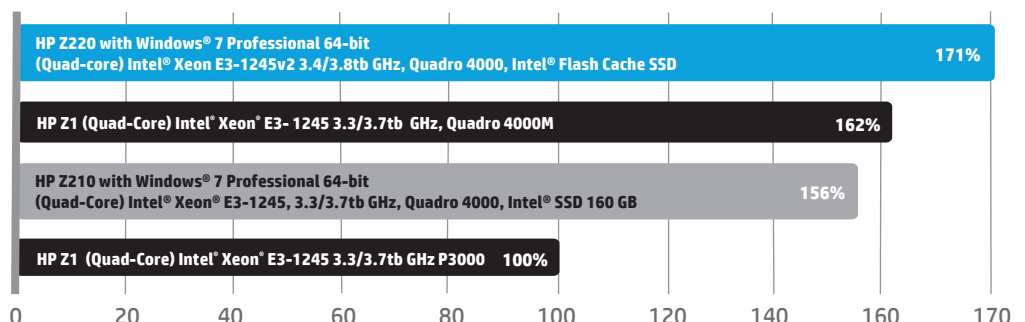
“Because of our strong partnership with HP, our customers will be well served by selecting HP as their professional computing platform. HP Workstations are thoroughly tested and SolidWorks-certified to provide the utmost in performance and reliability for SolidWorks 3D CAD software.”

—Nick Iwaskow, Senior Alliances & Partnership Manager, Dassault Systèmes SolidWorks Corp.

Performance selection takes careful planning

HP Workstations—SolidWorks 2012 Performance Benchmark*

Relative Performance (Higher is Better)



This chart compares the HP Z1 Workstation to a similarly configured HP Z210 and HP Z220 Workstation and shows the HP Z1 Workstation with Intel HD Graphics P3000 integrated graphics as a baseline. This is intended to provide performance guidance for these products. All systems were tested with Windows® 7 Professional 64-bit®, by HP Technical Marketing in May 2012. tb = Turbo Boost® rating.

Built to perform like no other.

The HP Z Workstation family meets the full range of your workstation needs—from performance-driven computing and design work in space-constrained environments to extreme visualization and analysis with complex datasets.

HP Z1 Workstation.

Get all the power without the tower. >>

When you work in product development, space on your desk is at a premium. The all-in-one HP Z1 Workstation helps you simplify your desktop, save space, and eliminate wires. It puts the performance and reliability of a complete HP Z Workstation expertly designed into the back of a 27-inch diagonal greater than HD display. Add a wireless keyboard and mouse, the only cord you need is for power. Better still, a tool-less chassis design makes it a snap to upgrade and maintain.

HP Z220 Workstations

Our most affordable workstations. >>

Available in an expandable minitower or a compact small form factor, the HP Z220 Workstations deliver workstation performance and reliability at starting prices that rival desktop PCs. Ideal for SolidWorks users.

HP Z420 Workstation

Performance you want. Value you need. >>

The HP Z420 Workstation provides high levels of performance and expandability in an accessible tool-free mini-tower form factor—all at a great price. Ideal for SolidWorks users handling large assemblies and very complex parts.

HP Z620 Workstation

Our most versatile workstation ever. >>

With up to 16 discrete processor cores, the HP Z620 Workstation packs tons of computing and visualization power into a quiet, compact footprint. Ideal for rendering on a low budget.

HP Z820 Workstation

Our ultimate workstation. >>

The dual-socket HP Z820 Workstation delivers exceptional performance, award-winning industrial design, and tool-free serviceability in the industry's most expandable chassis. Ideal for SolidWorks users who do analysis and simulation.

HP Mobile Workstations

Mobility for Business. >>

Make no compromises on performance or durability with the HP EliteBook Mobile Workstations. Offering high performance with exceptional battery life. Inspired by aerospace craftsmanship and materials, they feature a wear and smudge-resistant DuraFinish and an optional backlit keyboard for use in low-light environments. With HP rigorous design testing, 26 drops and still running smooth.

HP Workstation Innovation Highlights

HP award-winning Workstations are rich with customer-driven innovations. Servicing is easy with a tool-less access chassis and modular, direct-connect drives and power supplies on select models.

HP Performance Series Displays

Stunning at every angle. >>



HP Performance Displays are engineered to outperform, so you can create with striking visual results. These displays deliver maximum image performance and accuracy, thanks to vivid IPS panels, 178-degree viewing angles, and up to 10x the contrast ratio of mainstream displays, with top end resolutions. They also offer 30-bit panels (over 1 billion colors)^{1,2} for outstanding visualization.

HP Performance Advisor

The built-in workstation guru. >>



HP Performance Advisor delivers a simple, effective way to keep your HP Workstation operating at its peak potential. Like having an IT pro always on hand, this helpful software wizard can take you from initial configuration and customization through the optimization of your system for each new application and driver you install.

Remote Graphics Software

Remote access with a “just like local” feel. >>

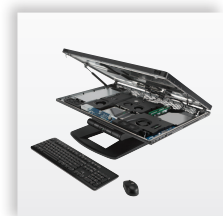


HP Remote Graphics Software gives you high-performance remote desktop access to your 2D, 3D, video, and media-rich applications—when and where you need them, on-site or from a remote location through a standard Internet connection. This HP innovation allows you to collaborate with colleagues across geographies, in real-time, using content-rich interactive applications.



Desktop Engineering
Editor's Pick of the Week:
HP Z1 Workstation >>

HP Innovation helps customers do more, and get more.



HP recommends Windows® 7.



HP Workstations for SolidWorks Products

Model	HP Z220 CMT & HP Z220 SFF for affordable high performance	HP Z1 for simplicity, all-in-one, and great performance	HP Z420 for mainstream users needing memory expansion	HP Z620 for affordable multi-core machines	HP Z820 for the best performance and expandability	HP EliteBook 8470w/8570w/8770w Mobile Workstations for power on the go
Operating System	Genuine Windows® 7 Ultimate 64-bit†	Genuine Windows® 7 Ultimate 64-bit†	Genuine Windows® 7 Ultimate 64-bit†	Genuine Windows® 7 Ultimate 64-bit†	Genuine Windows® 7 Ultimate 64-bit†	Genuine Windows® 7 Professional 64-bit†
SolidWorks Solution	SolidWorks standard user	SolidWorks elite user	SolidWorks performance users with some visualization	SolidWorks users with significant visualization and analysis	SolidWorks extreme users	All SolidWorks applications Choose higher resolution display
Recommended Min Processors 3,4,5,6,7	Intel® Xeon® Processor E3-1230v2, 3.30 GHz, 3.7 T, HT, 8 MB cache, 69 W, Quad-Core, 1600 MHz memory	Intel® Xeon® Processor E3-1245, 3.3 GHz, 95 W, 8 MB cache, 1333 MHz memory, Quad-Core, HT	Intel® Xeon® Processor E5-1620, 3.6 GHz, 10 MB cache, 1600 MHz, Quad-Core	(2) Intel® Xeon® Processor E5-2667, 2.9 GHz, 130 W, 15 MB cache, 1600 MHz memory, Six-Core, HT	(2) Intel® Xeon® Processor E5-2667, 2.9 GHz, 130 W, ⁸ 15 MB cache, 1600 MHz memory, Six-Core, HT	Intel® Core™ i7-3720QM, 2.6 GHz (up to 3.6 GHz), 1600 MHz, 6 MB L3 cache, 45W
Recommended Min Graphic Card	NVIDIA Quadro 600, AMD FirePro V4900, AMD FirePro V3800 (SFF)	NVIDIA Quadro 1000M	NVIDIA Quadro 2000 or AMD FirePro V5900	NVIDIA Quadro 2000 or AMD FirePro V5900	NVIDIA Quadro 4000 or AMD FirePro V7900	AMD FirePro M2000 (14"), AMD FirePro M4000 (15" or 17"), NVIDIA Quadro K1000M (15"), NVIDIA Quadro K3000M (17")
Memory Guidance⁹	8 GB	8 GB	16 GB	16 GB	32 GB	16 GB, 8 GB (14")
Disk Drive Guidance^{10,11}	256 GB SATA SSD 500 GB 7200 RPM SATA HDD	(2) 160 GB SATA SSD or (1) 500 GB 7200 RPM SATA HDD	256 GB SATA SSD 500 GB 7200 RPM SATA HDD	(2) 256 GB SATA SSD (RAID 0) (2) 500 GB 7200 RPM SATA HDD	(2) 256 GB SATA SSD (RAID 0) (2) 500 GB 7200 RPM SATA HDD	256 GB SATA III or 500 GB 7200 RPM SATA (17" use both)

Learn more

hp.com/go/solidworks and hp.com/zworkstations

Screen images courtesy of Local Motors and Spracher Engineering.

- † Windows 7 systems may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See microsoft.com/windows/windows-7 for details.
- 1. All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.
- 2. 1.07B colors through A-FRC technology
- 3. 64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See intel.com/info/em64t for more information.
- 4. Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See intel.com/technology/turboboost for more information.
- 5. Intel HT Technology (HT) is designed to improve performance of multi-threaded software products and requires a computer system with a processor supporting HT and an HT-enabled chipset, BIOS and operating system. Please contact your software provider to determine compatibility. Not all customers or software applications will benefit from the use of HT. See intel.com/info/hyperthreading for more information.
- 6. Multi-core is designed to improve performance of multithreaded software products and hardware-aware multitasking operating systems and may require appropriate operating system software for full benefits; check with software provider to determine suitability. Not all customers or software applications will necessarily benefit from use of these technologies.
- 7. Intel's numbering is not a measurement of higher performance.
- 8. In the HP Z820 Workstation, the Intel® Xeon® Processors E5-2667 require the 1125W chassis.
- 9. Each processor supports up to 2 channels (HP Z220/HP Z220 SFF) or 4 channels (HP Z420/HP Z620/HP Z820) of DDR3 memory. To realize full performance, at least 1 DIMM must be inserted into each channel. To get full 8 channel support on the HP Z620 & HP Z820, two processors MUST be installed.
- 10. For hard drives, 1 GB = 1 billion bytes. 1 TB = 1 trillion bytes. Actual formatted capacity is less. Up to 20 GB of hard drive (or system disk) is reserved for the system recovery software for Windows 7.
- 11. SATA hardware RAID is not supported on Linux systems. The Linux kernel, with built-in software RAID, provides excellent functionality and performance. It is a good alternative to hardware-based RAID. Please visit <http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf> for RAID capabilities with Linux.

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