HP Z400 WORKSTATION

Raising the bar for entry workstations

With its revolutionary new architecture and power that will redefine multi-tasking, the HP Z400 Workstation helps you accomplish more with every minute of your time and every dollar of your investment.

Innovation that will transform the way you work
With a smart new chassis that is easy to service, optional liquid cooling, and quiet operation to blend unobtrusively into your work environment, the HP Z400 Workstation showcases HP innovation—inside and out.

Minimize power and cooling costs with ENERGY STAR® qualified configurations featuring 80% and 85% efficient power supplies and HP WattSaver which, when activated, lowers energy consumption to less than 1 Watt in off mode.

Performance to help you accomplish more with every minute
Take on bigger computing challenges with the new Intel® QuickPath Technology and your choice of the latest quad- or six-core Intel® Xeon® processors.[1,2]

- Run more tasks, processes, and applications simultaneously with a workstation that brings together and optimizes the latest processors, memory, graphics, and storage technologies
- Choose from a wide range of professional graphics from NVIDIA and ATI as well as from a breadth of OS options.

Reliability derived from our legendary, confidence-inspiring quality
- Close relationships with ISVs help ensure that HP Workstations are fully certified and optimized for your applications
- In-depth testing and quality assurance keep you productively up-and-running
- HP Performance Advisor helps ease configuration and updates while optimizing a range of applications
- Quickly capture complete system configuration data and share it with IT personnel with HP Vision Field Diagnostics, an easy-to-use system diagnostics tool that runs outside the OS
- Comprehensive, lifetime HP Total Care options, easy HP financing solutions, and an array of monitors and other accessories make HP Workstations easy to own and use

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HP recommends Windows® 7.

Form factor	Convertible minitower
Operating systems	Genuine Windows® 7 Professional* Genuine Windows® 7 Ultimate 64-bit* HP Installer Kit for Linux (includes drivers for both 32-bit and 64-bit OS versions of Red Hat Enterprise Linux and Novell SLED 11) Novell Suse SLED 11 Linux Red Hat Enterprise Linux Desktop (paper license as drop-in-the-box only)
Available processors[1,2,3,4,5]	Intel® Xeon® processor W3503, 2.40 GHz, 4 MB cache, 1066 MHz memory, 4.8GT/s QPI, Dual-Core Intel Xeon processor W3505, 2.53 GHz, 4 MB cache, 1066 MHz memory, 4.8GT/s QPI, Dual-Core Intel Xeon processor W3520, 2.66 GHz, 8 MB cache, 1066 MHz memory, 4.8GT/s QPI, Quad-Core, HT, Turbo Intel Xeon processor W3550, 3.06 GHz, 8 MB cache, 1066 MHz memory, 4.8GT/s QPI, Quad-Core, HT, Turbo Intel Xeon processor W3565, 3.20 GHz, 8 MB cache, 1066 MHz memory, 4.8GT/s QPI, Quad-Core, HT, Turbo Intel Xeon processor W3670, 3.20 GHz, 12 MB cache, 1066 MHz memory, 4.8GT/s QPI, Six-Core, HT, Turbo Intel Xeon processor W3680, 3.33 GHz, 12 MB cache, 1333 MHz memory, 6.4GT/s QPI, Six-Core, HT, Turbo Intel Xeon processor W3690, 3.46 GHZ, 12 MB cache, 1333 MHz memory, 6.4GT/s QPI, Six-Core, HT, Turbo HP Liquid Cooling Solution (optional)
Chipset	Intel® X58 Express
Memory[6]	6 DIMM slots, up to 24 GB DDR3 1333 MHz** (**actual memory speed dependent on processor capability)
Drive controllers[7]	Integrated SATA 3 GB/s controller, RAID 0, 1, 5, 10 capable; Optional SAS controller: LSI 9212-4i 4-port SAS/SATA 6 Gb/s, RAID 0, 1, 10 capable
Hard drive(s)[8]	Up to (4) 3.5-inch 7200 rpm SATA drives: 160, 250, 320, 500 GB, 1, 1.5, 2 TB, 8 TB max; Up to (4) 2.5-inch 10K rpm SATA drives: 160, 300, 600 GB, 2.4 TB max; Up to (4) 3.5-inch 15K rpm SAS drives: 300, 450, 600 GB, 2.4 TB max; Up to (4) 2.5-inch SATA solid state drives: Intel X25-M 160 GB, 640 GB max
Optical drives[9,10]	DVD-ROM, DVD+/-RW, HP Blu-ray Writer
Drive bays	3 external 5.25-inch bays, 2 internal 3.5-inch HDD bays (4 total when using 5.25-inch bay converters); up to 4 eSATA
Slots	2 PCI Express Gen2 x16 mechanical/electrical, 1 PCI Express Gen2 x8 mechanical/x4 electrical, 1 PCI Express Gen1 x8 mechanical/x4 electrical, 2 PCI

Graphics **(dual graphics on selected cards)**	**Professional 2D:**	NVIDIA Quadro NVS 295 (256 MB), NVIDIA NVS 300 (512 MB), NVIDIA Quadro NVS 450 (512 MB), AMD FirePro 2270 (512 MB)
	Entry 3D:	NVIDIA Quadro FX 380 (256 MB), NVIDIA Quadro 400 (512 MB), NVIDIA Quadro 600 (1 GB), ATI FirePro V3800 (512 MB), ATI FirePro V4800 (1 GB)
	Midrange 3D:	NVIDIA Quadro 2000 (1 GB), ATI FirePro V5800 (1 GB)
	High-end 3D:	NVIDIA Quadro 4000 (2 GB), NVIDIA Quadro FX 4800 (1.5 GB), NVIDIA Quadro 5000 (2.5 GB), NVIDIA Tesla C2050

Audio	High Definition Integrated Realtek ALC262 Audio and integrated speaker; optional Creative X-Fi Titanium PCIe Audio Card; optional HP Thin USB Powered Speakers	
Network	Integrated Broadcom 5764 LAN, Infineon TPM 1.2 controller, optional Broadcom NIC, optional Intel NIC	
Ports	**Front:**	2 USB 2.0; 1 IEEE 1394a standard; 1 microphone in; 1 headphone out; HP 22-in-1 Media Card Reader (optional)
	Rear:	6 USB 2.0; 2 USB 3.0 via add-in PCIe card; 2 optional IEEE 1394a or IEEE 1394b ports via add-in PCI card; 1 audio in; 1 audio out; 1 microphone in; 2 PS/2; 1 RJ-45 to integrated Gigabit LAN; 1 serial (optional)
	Internal:	4 USB 2.0; supports up to two HP Internal USB Port Kits (one port on each Kit), or up to two USB Media Card Readers, or one Internal Port kit and one USB Media Card Reader
Input devices	PS/2 standard keyboard; USB standard keyboard; USB Smart Card Keyboard; PS/2 optical scroll mouse; USB 2-button optical scroll mouse; USB 3-button optical mouse; USB SpaceExplorer; USB SpacePilot; USB Laser Scroll Mouse	
Dimensions (H x W x D)	17.7 x 6.6 x 17.9 in (45.02 x 16.79 x 45.53 cm)	
Power supply	475-Watt 85% efficient or 600-Watt 80% efficient power supply	
Monitors (screen size diagonally measured)	HP ZR30w 30-inch S-IPS LCD Monitor, HP LP3065 30-inch Widescreen LCD Monitor, HP LP2475w 24-inch Widescreen LCD Monitor, HP DreamColor LP2480zx Professional Display, 24-inch Widescreen LCD Monitor; HP ZR24w 24-inch S-IPS LCD Monitor, HP ZR22w 21.5-inch S-IPS LCD Monitor, HP LP2065 20-inch LCD Monitor	
Warranty	Limited three-year Mon-Fri 8-5 next business day,[11] parts, labor and 24x7 phone support, terms and conditions may vary.	

* 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 http://www.microsoft.com/windows/windows-7/ for details.

1. Dual-, quad-, and six-core technologies are 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.
2. 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 http://www.intel.com/info/em64t for more information.
3. Intel's numbering is not a measurement of higher performance.
4. The hyper-threading feature is designed to improve performance of multi-threaded software products; please contact your software provider to determine software compatibility. Not all customers or software applications will benefit from the use of hyperthreading. Go to http://www.intel.com/info/hyperthreading for more information, including which processors support HT Technology.
5. 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 www.intel.com/technology/turboboost for more information.
6. Each processor supports up to 3 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel.
7. 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.
8. For hard drives, 1 GB = 1 billion bytes. 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.
9. Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copyright 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.
10. As Blu-ray is a new format containing new technologies, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require a DVI or HDMI digital connection and your display may require HDCP support. HD-DVD movies cannot be played on this workstation.
11. HP Care Pack Services extend service contracts beyond the standard warranties. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at http://www.hp.com/go/carepack. Service levels and response times for HP Care Packs may vary depending on your geographic location.