



## 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 (expected availability 07/09), 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 85% efficient power supplies
- Help save energy with 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 dual- or quad-core Intel® Xeon® processors.<sup>1</sup>

- 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 Tuning Framework 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

# HP Z400 WORKSTATION

HP recommends Windows Vista® Business

<b>Form factor</b>	Convertible minitower
<b>Operating systems</b>	Genuine Windows Vista® Business 32-bit with downgrade to Windows® XP Professional 32-bit custom installed* Genuine Windows Vista® Business 64-bit with downgrade to Windows® XP Professional x64 custom installed* Genuine Windows Vista® Business 32-bit** Genuine Windows Vista® Business 64-bit** HP Installer Kit for Linux (includes drivers for both 32-bit and 64-bit OS versions of Red Hat Enterprise Linux WS4 and WS5) (expected availability 05/09) Novell Suse SLED 11 (expected availability 05/09)
<b>Available processors</b>	Intel® Xeon® processor <sup>1,2</sup> W3503 <sup>3</sup> , 2.40 GHz, 4 MB cache, 1066 MHz memory, Dual-Core Intel Xeon processor <sup>1,2</sup> W3505 <sup>3</sup> , 2.53 GHz, 4 MB cache, 1066 MHz memory, Dual-Core Intel Xeon processor <sup>1,2</sup> W3520 <sup>3</sup> , 2.66 GHz, 8 MB cache, 1066 MHz memory, Quad-Core Intel Xeon processor <sup>1,2</sup> W3540 <sup>3</sup> , 2.93 GHz, 8 MB cache, 1066 MHz memory, Quad-Core Intel Xeon processor <sup>1,2</sup> W3570 <sup>3</sup> , 3.20 GHz, 8 MB cache, 1333 MHz memory, Quad-Core
<b>Chipset</b>	Intel® X58 Express
<b>Memory<sup>4</sup></b>	4 DIMM slots, up to 16 GB (4 GB DIMMs expected availability 05/09), DDR3 1333 MHz** (**actual memory speed dependent on processor capability)
<b>Drive controllers<sup>5</sup></b>	Integrated SATA 3 GB/s controller, RAID 0, 1, 5, 10 capable; Optional SAS controller, LSI 3041E 4-port SAS/SATA, RAID 0, 1, 10 capable
<b>Hard drive(s)<sup>6</sup></b>	Up to (4) 3.5-inch 7200 rpm SATA drives: 160, 250, 320, 500 GB, 1, 1.5* TB, 6 TB max*; Up to (4) 2.5-inch 10K rpm SATA drives: 160, 300 GB SFF, 1.2 TB max; Up to (4) 3.5-inch 15K rpm SAS drives: 146, 300, 450 GB, 1.8 TB max (*1.5 TB SATA drive expected availability 9/09)
<b>Optical drives<sup>7,8</sup></b>	DVD-ROM, DVD+/-RW, Blu-Ray Writer (expected availability 05/09)
<b>Drive bays</b>	3 external 5.25-inch bays, 2 internal 3.5-inch HDD bays (4 max with converter)
<b>Slots</b>	2 PCI Express Gen2 x16, 1 PCI Express Gen2 x8 mechanical/x4 electrical, 1 PCI Express Gen1 x8 mechanical/x4 electrical, 2 PCI
<b>Graphics (dual graphics on selected cards)</b>	<b>Professional 2D:</b> NVIDIA Quadro NVS 295 (256 MB), NVIDIA Quadro NVS 450 (512 MB) <b>Entry 3D:</b> NVIDIA Quadro FX 380 (256 MB), ATI FirePro V3700 (256 MB), NVIDIA Quadro FX 580 (512 MB) <b>Midrange 3D:</b> NVIDIA Quadro FX 1800 (768 MB), ATI FirePro V5700 (512 MB) <b>High-end 3D:</b> NVIDIA Quadro FX 3800 (1 GB) (available 06/09), ATI FirePro V7750 (1 GB), NVIDIA Quadro FX 4800 (1.5 GB), NVIDIA Quadro CX
<b>Audio</b>	High Definition Integrated Realtek ALC262 Audio, optional Creative X-Fi Titanium PCIe Audio Card, optional HP Thin USB Powered Speakers
<b>Network</b>	Integrated Broadcom 5764 LAN, Infineon TPM 1.2 controller, optional Broadcom NIC, optional Intel NIC
<b>Ports</b>	<b>Front:</b> 2 USB 2.0, 1 IEEE 1394a (optional), 1 microphone in, 1 headphone out, 22-in-1 Media Card Reader (optional), <b>Rear:</b> 6 USB 2.0, 1 audio in, 1 audio out, 1 microphone in, 2 PS/2, 1 RJ-45 to integrated Gigabit LAN, 1 serial (optional) <b>Internal:</b> 4 USB 2.0
<b>Input devices</b>	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
<b>Dimensions (H x W x D)</b>	17.7 x 6.6 x 17.9 in (45.02 x 16.79 x 45.53 cm)
<b>Power supply</b>	475-Watt 85% efficient power supply
<b>Monitors (screen size diagonally measured)</b>	HP LP1965 19-inch LCD Monitor, HP LP2275w 22-inch Widescreen LCD Monitor, HP LP2475w 24-inch Widescreen LCD Monitor, HP DreamColor LP2480zx Professional Display (24-inch diagonal widescreen), HP LP3065 30-inch Widescreen LCD Monitor
<b>Warranty</b>	Limited three-year next business day <sup>9</sup> , parts, labor and 8x5 phone support; Terms and conditions may vary.

\*Windows Vista Business disk may also be included for future upgrade if desired. To qualify for this downgrade an end user must be a business (including governmental or educational institutions) and is expected to order at least 25 customer systems with the same custom image.

\*\*Certain Windows Vista product features require advanced or additional hardware. See [www.microsoft.com/windowsvista/getready/hardwarereqs.mspx](http://www.microsoft.com/windowsvista/getready/hardwarereqs.mspx) and [www.microsoft.com/windowsvista/getready/capable.mspx](http://www.microsoft.com/windowsvista/getready/capable.mspx) for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit [www.windowsvista.com/upgradeadvisor](http://www.windowsvista.com/upgradeadvisor).

<sup>1</sup> Dual-Core and Quad-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.

<sup>2</sup> 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 [www.intel.com/info/em64t](http://www.intel.com/info/em64t) for more information.

<sup>3</sup> Intel's numbering is not a measurement of higher performance.

<sup>4</sup> Each processor supports up to 3 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel. To get full 6 channel support, 2 processors MUST be installed.

<sup>5</sup> 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.

<sup>6</sup> For hard drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 12 GB of hard drive (or system disk) is reserved for the system recovery software (XP and XP Pro). Up to 3 GB of system disk is reserved for system recovery software. (Vista).

<sup>7</sup> 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.

<sup>8</sup> 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.

<sup>9</sup> 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 [www.hp.com/go/lookuptool](http://www.hp.com/go/lookuptool). Additional HP Care Pack Services information by product is available at [www.hp.com/hps/carepack](http://www.hp.com/hps/carepack). Service levels and response times for HP Care Packs may vary depending on your geographic location.



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