Datasheet

HP Z420 Workstation

Expand your power

Performance you want. Value you need. Maintain professional expandability in an accessible, tool-free mini-tower form factor—all at a great price. With support for next-generation Intel® Xeon® processor families, the latest graphics technology, and increased I/O expandability, the HP Z420 has the power you need to get the job done.

HP recommends Windows.

Intelligent, business-forward design.
- Quickly and easily swap out parts or make upgrades on your own. The HP Z420 Workstation features a smart chassis design built for tool-less access to the inside and easy configurability.

Maximum performance.
- Bring power and performance to the next level with the all new E5-1680 v2 8-core processor and Intel® C602 chipset.[2]
- Achieve up to an 86% increase in memory bandwidth over previous generation HP workstations[3]. Support up to 64 GB of the latest generation of system memory with 8 DIMM slots and integrated 1,866MHz DDR3 memory subsystem.[4]
- Take advantage of a 600 W 90% efficient power supply ideal for high-end graphics and GPU compute solutions.
- Connect in a flash with 4X USB 3.0 bandwidth on an optional high-performance ThunderboltTM 2.0 port[5] on the HP Z420.

Uncompromised graphics, increased productivity.
- Built to support next generation PCIe Gen3 graphics, the HP Z420 currently offers a breadth of AMD and NVIDIA professional graphics card options from Pro 2D to high-end 3D, up to the NVIDIA Quadro 6000.[2]
- Access high-performance applications, including 2D and 3D video, on-site or from a remote location with HP Remote Graphics software[6].
- Increase productivity and spread out with the freedom of seeing and doing more all at once with support for multiple displays at peak HD resolutions.[7]

Customized to work for you.
- Build the HP Z420 Workstation the way you want with multiple SATA and SAS RAID configuration options that support a wide range of high-performance, high capacity storage solutions.
- Get the flexibility you need with support for a wide range of internal HDD/ODD and external SATA devices.

Complete Peace of Mind.
- With ISV-certifications and 115,000 hours of testing in the HP Total Test Process, the HP Z420 is reliable and ready for business.
- HP workstations offer low-halogen[8] and ENERGY STAR® qualified configurations featuring efficient power supplies.
- HP Performance Advisor[9] configures your system with updated settings and drivers to help maximize performance.
- Relax with a standard, 3-year limited warranty. Choose optional HP Care Pack Services[10] to extend your service.

HP Z420 Workstation Specifications Table

HP recommends Windows.

Form Factor	Convertible Minitower
Operating System	Windows 8.1 Pro 64 Windows 8.1 Single Language 64 Windows 7 Professional 64 (available through downgrade rights from Windows 8.1 Pro 64) Windows 7 Professional 32 (available through downgrade rights from Windows 8.1 Pro 64) Windows 7 Professional 64 Windows 7 Professional 32 SUSE Linux Enterprise Desktop 11 HP Installer Kit for Linux
Processor Family	Intel® Xeon® E5 processor
Processors	Intel® Xeon® E5-2650 v2 (2.6 GHz, 20 MB cache, 8 cores); Intel® Xeon® E5-1680 v2 (3 GHz, 25 MB cache, 8 cores); Intel® Xeon® E5-1660 v2 (3.7 GHz, 15 MB cache, 6 cores); Intel® Xeon® E5-1650 v2 (3.5 GHz, 12 MB cache, 6 cores); Intel® Xeon® E5-1620 v2 (3.7 GHz, 10 MB cache, 4 cores); Intel® Xeon® E5-1607 v2 (3 GHz, 10 MB cache, 4 cores); Intel® Xeon® E5-1620 (3.6 GHz, 10 MB cache, 4 cores); Intel® Xeon® E5-1603 (2.8 GHz, 10 MB cache, 4 cores)
Chipset	Intel® C602
Maximum Memory	Up to 64 GB 1600 MHz DDR3 Unbuffered SDRAM Standard memory note: Actual memory speed is dependent on processor.
Memory Slots	8 DIMM
Drive Controllers	Integrated SATA 6.0 Gb/s; Integrated SATA 3.0 Gb/s; LSI 9217-4i4e 8-port SAS 6.0 Gb/s RAID (optional); LSI MegaRAID® 9270-8i SAS 6.0 Gb/s ROC RAID Card and iBBU09 Battery Backup Unit (optional)
Internal Storage	300 GB up to 600 GB SAS (15000 rpm) 300 GB up to 1.2 TB SAS (10000 rpm) 500 GB up to 3 TB SATA (7200 rpm) 128 GB up to 1 TB SATA SSD up to 256 GB SATA SE SSD
Optical Storage	SATA Blu-ray writer; SATA SuperMulti DVD+/-RW; SATA DVD-ROM
Drive Bays (Internal)	Three 8,9 cm (3.5")
Drive Bays (External)	Three 13,3 cm (5.25")
Available Graphics	Professional 2D: NVIDIA NVS 310 (512 MB); NVIDIA NVS 315 (1 GB); NVIDIA NVS 510 (2 GB) Entry 3D: NVIDIA Quadro 410 (512 MB); NVIDIA Quadro K600 (1 GB); AMD FirePro V3900 (1 GB) Midrange 3D: NVIDIA Quadro K2000 (2 GB) High-end 3D: NVIDIA Quadro K4000 (3 GB); NVIDIA Quadro K5000 (4 GB); AMD FirePro W7000 (4 GB); NVIDIA Quadro K6000 (12 GB) High Performance GPU Computing: NVIDIA Tesla K40; NVIDIA Tesla K20c
Expansion Slots	2 PCIe Gen3 x16; 1 PCIe Gen3 x8; 1 PCIe Gen2 x8 (x4); 1 PCIe Gen2 x4 (x1); 1 PCI; 1 14-in-1 media card reader (optional) The PCIe x8 connectors are open ended, allowing a PCIe x16 card to be seated in the slot.
Ports and Connectors	4 USB 3.0; 5 USB 2.0; 2 IEEE 1394a; 2 PS/2; 1 RJ-45; 2 microphone; 1 audio line out; 1 audio line in; 1 headphone HP Thunderbolt 2 1-port PCIe card (optional); HP IEEE 1394b FireWire PCIe card (optional); 6 internal USB 2.0 available by 3 separate 2x5 headers
Communications	Integrated Intel 82579LM PCIe Gigabit Ethernet Controller; Broadcom NetXtreme Gigabit Ethernet Plus PCIe NIC (optional); Intel Gigabit CT Desktop NIC (optional); HP 361T PCIe Dual-Port Gigabit NIC (optional); Intel Ethernet I210-T1 PCIe NIC (optional); HP Wireless 802.11 b/g/n PICe NIC (optional); HP X520 10GbE Dual-Port Adapter (optional); HP 10GbE SFP+ SR Transceiver (optional)
Audio	Integrated High Definition Realtek ALC262 Audio
Power	600 W 90% efficient, wide-ranging, active PFC
Security	Padlock Support (standard - padlock optional); Cable Lock Support (standard - cable optional); Universal Chassis Clamp Lock (optional); Serial, Parallel, USB, Audio, Network Enable/Disable (standard); Removable Media Write/Boot Control (standard); Power-On Password (standard); Setup Password(standard); Solenoid Lock and Hood Sensor (optional)
Software	HP Performance Advisor; HP Remote Graphics Software (RGS) V5; HP ProtectTools Security (available as configurable option); HP Power Assistant; PDF Complete - Corporate Edition (for Windows operating systems only); Cyberlink PowerDVD/Power2Go; Office Home & Business 2013 (available as configurable option)
Dimensions	17.78 x 44.52 x 44.76 cm Standard minitower orientation
Weight	Starting at 12.5 kg Exact weight depends upon configuration.
Energy Efficiency Compliance	ENERGY STAR® qualified configurations available
Warranty	3-year limited warranty including 3 years of parts, labour, and next-business-day onsite service. Terms and conditions vary by country. Certain restrictions and exclusions apply.

HP Z420 Workstation

Accessories and services (not included)

HP ZR2240w 21.5-inch LED Backlit IPS Monitor

The HP ZR2240w 54,6 cm (21.5") LED Backlit IPS Monitor has a new LED backlight, HDMI input and 1920 x 1080 full HD resolution in an ultra-modern design that's sleeker than ever to perfectly complement HP Z Workstations.
Product number: XW475A4

HP SpacePilot Pro USB 3D Input Device

Working in 3D has just become easier and more efficient with an HP SpacePilot Intelligent Controller, which combines refined sensing technology, extendable speed keys, and ergonomic design to give you 3D control, speeding up your design work -faster than you ever thought possible. When you intuitively push, tilt, or twist the control cap, the response is immediate. SpacePilot also features 21 speed keys that increase your efficiency and make working with your designs less stressful and more enjoyable, without the intrusive functionality of a mouse and keyboard alone.
Product number: WH343AA

HP 160GB SATA Solid State Drive

Solid State Drives (SSDs) are fast becoming a real force with respect to storage in the computer industry. With no moving parts, storage is no longer bound by mechanical barriers to higher performance. HP SSDs for workstations offer overall performance typcially beyond that of SAS 15k rpm HDDs (Hard Disk Drives).
Product number: LZ704AA

NVIDIA Quadro 600 1.0GB Graphics Card

The low-profile NVIDIA Quadro 600 is the newest entry-level professional graphics solution, delivering maximum productivity and flexibility for engineers and designers.
Product number: WS093AA

NVIDIA Quadro 2000 1.0GB Graphics Card

The NVIDIA Quadro 2000, based on Fermi architecture, maximizes productivity for engineers and designers by up to 5 times
Product number: WS094AA

5-year Next Business Day Onsite

Receive 5 years of next business day onsite repair from an HP-qualified technician for your computing device, if the issue cannot be solved remotely.
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HP recommends Windows.

Messaging Footnotes:

[1] Optional features sold separately or as add on features.

[2] Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 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.

[3] Up to 86% increase in available memory bandwidth can be achieved on the Z420 over the Z400 on optimized configurations with memory distributed across all channels using 1,333 MHz memory speed on the Z400 and 1,866 MHz memory speed on the Z420. This does not imply an 86% increase in performance.

[4] Maximum memory capacities assume Windows 64-bit operating systems or Linux. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.

[5] Thunderbolt is new technology. Thunderbolt cable and Thunderbolt device (sold separately) must be compatible with Windows. To determine whether your device is Thunderbolt Certified for Windows, see https://thunderbolttechnology.net/products. Thunderbolt™ 2.0 is planned to be available via an optional add-in card in early 2014.

[6] HP Remote Graphics Software requires Windows and an internet connection.

[7] Support for external displays as a standard feature through integrated processor-based graphics is dependent upon the particular workstation configuration; the actual number of displays supported will vary. An optional graphics solution will be required for the support of additional displays. Additional cables required. HD (high-definition) content required to view HD images.

[8] External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

[9] HP Performance Advisor requires Windows and an internet connection.

[10] HP Care Pack services are sold separately. Service levels and response times for HP Care Pack Services may vary depending on your geographic location. Service starts from date of hardware purchase. Restrictions and limitations apply. See www.hp.com/go/cpc for details.

Learn more at
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4AA3-9686EEE, February 2015