HP Z840 Workstation

Push your computing boundaries with the HP Z840 Workstation that helps you keep up with your biggest projects. Built for high-end computing and visualization, it delivers outstanding performance in one of the industry's most expandable chassis.

HP recommends Windows.

Windows 8.1 [1]
Intel® Xeon™ processors [2]

Prepare to be spectacular
- The HP Z840 Workstation, HP's highest performing workstation gets the best of HP Z DNA with incredible processing power, professional graphics, maximized memory, and internal storage capacity that helps you create work that makes a statement.

Get going
- Experience expansion like you never dreamed possible with 7 PCIe slots, up to 10 internal drive bays, and 16 memory slots supporting up to 2TB of memory [3] the HP Z840 can do it all. Ready to get going?

Keep going
- Reach your goals with the HP Z840 Workstation featuring uncompromised reliability, a tool-less chassis to facilitate upgrades, a rackable option [4] in addition to a desk side system, a lockable side panel, and handles to move the system around.

Featuring:
- Achieve the performance you need with the ability to support two next generation Intel® Xeon® processors for up to 36 total processor cores in one system. [2]
- Take productivity up a notch with the ability to do more thanks to NVIDIA professional graphics cards in 2D or 3D. [4]
- Get serious about graphics and reach peak productivity with access to a breadth of AMD professional graphics from entry to high-end 3D. [4]
- Maximize your time and increase your capabilities with USB and SATA ports, plus lightning-fast data transfers using optional ThunderboltTM 2 technology. [5]
- A new tool-free chassis boasts low acoustics, dual integrated Gb Ethernet, aluminum panels, handles for lifting, and is 5U rack mountable—all in an elegant industrial design.
- Reduce boot up, calculation, and graphics response and revolutionize how your HP Z840 handles large files with the HP Z Turbo Drive, a remarkably fast and innovative storage solution.
- Take multitasking to a new level with support for up to eight displays. [6]
- Optimize performance automatically with the with the most current settings and drivers. [7]
- Each HP Z840 Workstation works with HP Client Management Solutions. [8]

HP Z840 Workstation Specifications Table

Form Factor	Rackable minitower
Operating System	Windows 8.1 Pro 64 [1] Windows 7 Professional 64 (available through downgrade rights from Windows 8.1 Pro 64) [2] Windows 7 Professional 64 (National Academic) [1] HP Installer Kit for Linux (HP Linux Installer Kit includes drivers for 64-bit versions of Red Hat® Enterprise Linux 5 and 6 and SUSE Linux Enterprise Desktop 11. Download Red Hat Enterprise Linux (1-year paper license only) which is available as a second operating system.)
Processor Family	Intel® Xeon® E5 v3 processor
Processors [3,4]	Intel® Xeon® E5-2699 v3 (2.3 GHz, 45 MB cache, 18 cores, Intel® vPro™); Intel® Xeon® E5-2697 v3 (2.6 GHz, 35 MB cache, 14 cores, Intel® vPro™); Intel® Xeon® E5-2695 v3 (2.3 GHz, 35 MB cache, 14 cores, Intel® vPro™); Intel® Xeon® E5-2690 v3 (2.6 GHz, 30 MB cache, 12 cores, Intel® vPro™); Intel® Xeon® E5-2687W v3 (3.1 GHz, 25 MB cache, 10 cores, Intel® vPro); Intel® Xeon® E5-2683 v3 (2 GHz, 35 MB cache, 14 cores, Intel® vPro™); Intel® Xeon® E5-2680 v3 (2.5 GHz, 30 MB cache, 12 cores, Intel® vPro™); Intel® Xeon® E5-2670 v3 (2.3 GHz, 30 MB cache, 12 cores, Intel® vPro™); Intel® Xeon® E5-2667 v3 (3.2 GHz, 20 MB cache, 8 cores, Intel® vPro™); Intel® Xeon® E5-2660 v3 (2.6 GHz, 25 MB cache, 10 cores, Intel® vPro™); Intel® Xeon® E5-2650 v3 (2.3 GHz, 25 MB cache, 10 cores, Intel® vPro™); Intel® Xeon® E5-2643 v3 (3.4 GHz, 20 MB cache, 6 cores, Intel® vPro™); Intel® Xeon® E5-2640 v3 (2.6 GHz, 20 MB cache, 8 cores, Intel® vPro™); Intel® Xeon® E5-2637 v3 (3.5 GHz, 15 MB cache, 4 cores, Intel® vPro™); Intel® Xeon® E5-2630 v3 (2.4 GHz, 20 MB cache, 8 cores, Intel® vPro™); Intel® Xeon® E5-2623 v3 (3 GHz, 10 MB cache, 4 cores, Intel® vPro™); Intel® Xeon® E5-2620 v3 (2.4 GHz, 15 MB cache, 6 cores, Intel® vPro™); Intel® Xeon® E5-2609 v3 (1.9 GHz, 15 MB cache, 6 cores, Intel® vPro™); Intel® Xeon® E5-2603 v3 (1.6 GHz, 15 MB cache, 6 cores, Intel® vPro™)
Chipset	Intel® C612
Memory	512 GB DDR4-2133 ECC Registered RAM 32 GB DDR4-2133 ECC Load-reduced RAM Actual memory speed dependent on processor. Registered and load-reduced DIMMS may not be mixed. 8 DIMM (with 1 processor) and 16 DIMM (with 2 processors)
Internal Storage	300 GB up to 600 GB SAS (15000 rpm) [5] 300 GB up to 1.2 TB SAS (10000 rpm) [5] 500 GB up to 3 TB SATA (7200 rpm) [5] 500 GB SATA SED [5] 128 GB up to 1 TB SATA SSD [5] 256 GB SATA SE SSD [5] 256 GB up to 512 GB HP Z Turbo Drive (PCIe SSD) [5]
Optical Storage	Slim SATA DVD-ROM; Slim SATA SuperMulti DVD writer; Slim SATA Blu-ray writer [6,7]
Additional Storage	1 15-in-1 media card reader (optional)
Available Graphics	Professional 2D: NVIDIA NVS 310 (512 MB); NVIDIA NVS 315 (1 GB); NVIDIA NVS 510 (2 GB) Entry 3D: NVIDIA Quadro K420 (1 GB); NVIDIA Quadro K620 (2 GB); AMD FirePro W2100 (2 GB) Mid-range 3D: AMD FirePro W5100 (4 GB); NVIDIA Quadro K2200 (4 GB) High-end 3D: NVIDIA Quadro K4200 (4 GB); NVIDIA Quadro K5200 (8 GB); NVIDIA Quadro K6000 (12 GB)
Audio	Integrated IDT 92HD94 audio
Communications	Integrated Intel I210AT PCIe GbE; Integrated Intel I218LM PCIe GbE; Intel Ethernet I210-T1 PCIe NIC (optional); HP X520 10 GbE Dual Port Adapter (optional); HP 10 GbE SFP+SR Transceiver (optional); HP 361T PCIe Dual Port Gigabit NIC (optional); Intel 7260 802.11a/b/g/n PCIe WLAN (optional) [8]
Expansion Slots	2 PCIe Gen3 x16; 1 PCIe Gen3 x16 (when 2nd CPU installed); 1 PCIe Gen2 x4 (when 1 CPU installed) OR PCIe Gen3 x8 (when 2nd CPU installed); 1 PCIe Gen3 x8; 1 PCIe Gen3 x4; 1 PCIe Gen2 x1 1 PCIe Gen2 x 4 when 1 CPU is installed. Transforms to PCIe Gen3 x8 when 2nd CPU installed. The PCIe x8 connectors are open ended, allowing a PCIe x16 card to be seated in the slot.
Ports and Connectors	Front: 4 USB 3.0; 1 combo headset; 1 microphone Back: 4 USB 3.0; 2 USB 2.0; 1 serial; 2 PS/2; 2 RJ-45; 1 audio line in; 1 audio line out Internal: 2 USB 2.0; 1 USB 3.0 Internal USB 2.0 available by the 2x5 header. Internal USB 3.0 available by the 2x10 header.
Drive Bays(Internal)	Four 3.5"
Drive Bays (External)	Two 5.25"; One slim ODD
Input Device	HP USB SmartCard Keyboard; HP 2.4 GHz Wireless Keyboard & Mouse; HP PS/2 Keyboard; HP USB Keyboard; [9] HP USB Optical 3-Button Mouse; HP PS/2 Mouse; HP USB Optical Mouse; HP USB 1000 dpi Laser Mouse; HP SpaceExplorer 3D USB Controller; HP SpacePilot Pro 3D USB Intelligent Controller; [9]
Software	HP Performance Advisor; HP Remote Graphics Software (RGS) 6.0; Cyberlink Media Suite & PowerDVD; Foxit PhantomPDF Express; Buy Office
Security	HP Chassis Intrusion Sensor; HP Security Cable with Kensington Lock [9]
Power	850 W 88% efficient, wide-ranging, active PFC; 1125 W 90% efficient, wide-ranging, active PFC
Dimensions	8 x 20.7 x 17.5 in 20.3 x 52.5 x 44.4 cm

Weight	46.7 lb 21.1 kg (Exact weight depends upon configuration.)
Energy Efficiency Compliance	ENERGY STAR® qualified and EPEAT® registered configurations available [10]
Environmental Certification	Low halogen[11]
Compatible Displays	HP Z Display Z30i 30-inch IPS LED Backlit Monitor; HP Z Display Z27i 27-inch IPS LED Backlit Monitor; HP Z Display Z24i 24-inch IPS LED Backlit Monitor; HP Z Display Z23i 23-inch IPS LED Backlit Monitor; HP Z Display Z22i 21.5-inch IPS LED Backlit Monitor; HP DreamColor LP2480zx Professional Display; HP DreamColor Z27x Professional Display; HP DreamColor Z24x Professional Display
Warranty	Protected by HP Services, including a standard limited 3 years parts, 3 years labor, and 3 years onsite service (3/3/3) warranty. Certain restrictions and exclusions apply.

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Accessories and services (not included)

HP Thunderbolt 2-Port AiO Module

Ultra-fast backup, editing, and file sharing, while reducing your time on tasks on select HP Z Workstations[1] with this 2-port module driven by Thunderbolt™ 2 technology.[2] Power through projects with data transfer speeds nearly 4x that of USB 3.0.
Product number: E5Z73AA

HP Z Turbo Drive 256GB PCIe Solid State Drive

Reduce boot up, calculation, and graphics response times (even with 4K video) and revolutionize how your HP Z Workstation handles large files with the HP Z Turbo Drive PCIe Solid State Drive, a remarkably affordable and innovative storage solution.
Product number: G3G88AA

HP Z Turbo Drive 512GB PCIe Solid State Drive

Reduce boot up, calculation, and graphics response times (even with 4K video) and revolutionize how your HP Z Workstation handles large files with the HP Z Turbo Drive PCIe Solid State Drive, a remarkably affordable and innovative storage solution.
Product number: G3G89AA

HP Z Display Z24i 24-inch IPS LED Backlit Monitor (ENERGY STAR)

Get outstanding image accuracy, exceptional adjustability, and mission-critical reliability optimized for commercial environments. Built with IPS Gen 2 panels, the HP Z24i 24-inch IPS Display delivers power savings over first-generation IPS technology and extra-wide viewing angles that foster collaboration.
Product number: D7P53A4

HP recommends Windows.

Messaging Footnotes

[1] Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. See http://www.microsoft.com.
[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 system required. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
[3] Available with 128GB DIMMs.
[4] Sold separately or as optional features.
[5] Thunderbolt is an optional or add-on feature. 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.
[6] Support for up to eight displays requires purchase of two graphics cards that support up to 4 displays simultaneously. Displays sold separately.
[7] HP Performance Advisor requires Windows and Internet access.
[8] Requires Windows operating system.
[9] Third party management software sold separately.

Technical Specifications Footnotes

[1] Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows functionality. See http://www.microsoft.com.
[2] This system is preinstalled with Windows 7 Professional software and also comes with a license and media for Windows 8.1 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
[3] 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 system required. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
[4] Some vPro functionality of this technology, such as Intel® Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Microsoft Windows required.
[5] For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 20 GB of system disk is reserved for Windows 7 and higher system recovery software.
[6] Duplication of copyrighted material is strictly prohibited. Actual speeds may vary. Double Layer media compatibility will widely vary with some home DVD players and DVD-ROM drives. Note that DVD-RAM cannot read or write to 2.6GB Single Sided/5.2 Double Sided-Version 1.0 Media.
[7] With Blu-Ray, 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 Desktop PC.
[8] Wireless cards are optional or add-on features and requires separately purchased wireless access point and internet service. Availability of public wireless access points limited.
[9] Optional or add-on feature
[10] EPEAT® registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country.
[11] External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.

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