



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 10 Pro.

- Windows 10 Pro¹
- Intel® Xeon™ processors²

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 1TB of memory 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 option³ 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 44 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 Thunderbolt™ 2 technology.⁵
- A new tool-free chassis boasts low acoustics, dual integrated Gb Ethernet, aluminum side 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	Tower
Operating System	Windows 10 Pro 64 for Workstations – HP recommends Windows 10 Pro. ¹ Windows 10 Home 64 ¹ Windows 7 Professional 64 (available through downgrade rights from Windows 10 Pro) ² Windows 8.1 Pro 64 ³ HP Installer Kit for Linux® HP Linux Installer Kit includes drivers for 64-bit versions of Red Hat® Enterprise Linux 6.7 and 7, SUSE Linux Enterprise Desktop 11 and Ubuntu 14.04. Red Hat Enterprise Linux (1-year paper license only) is available as a second operating system.
Processor Family	Intel® Xeon® E5-2600 v4 processor; Intel® Xeon® E5-2600 v3 processor
Processors^{5,6}	Intel® Xeon® E5-2699 v4 (2.2 GHz, 55 MB cache, 22 cores, Intel® vPro™); Intel® Xeon® E5-2697 v4 (2.3 GHz, 45 MB cache, 18 cores, Intel® vPro™); Intel® Xeon® E5-2695 v4 (2.1 GHz, 45 MB cache, 18 cores, Intel® vPro™); Intel® Xeon® E5-2690 v4 (2.6 GHz, 35 MB cache, 14 cores, Intel® vPro™); Intel® Xeon® E5-2687W v4 (3 GHz, 30 MB cache, 12 cores, Intel® vPro™); Intel® Xeon® E5-2683 v4 (2.1 GHz, 40 MB cache, 16 cores, Intel® vPro™); Intel® Xeon® E5-2680 v4 (2.4 GHz, 35 MB cache, 14 cores, Intel® vPro™); Intel® Xeon® E5-2667 v4 (3.2 GHz, 25 MB cache, 8 cores, Intel® vPro™); Intel® Xeon® E5-2660 v4 (2 GHz, 35 MB cache, 14 cores, Intel® vPro™); Intel® Xeon® E5-2650 v4 (2.2 GHz, 30 MB cache, 12 cores, Intel® vPro™); Intel® Xeon® E5-2643 v4 (3.4 GHz, 20 MB cache, 6 cores, Intel® vPro™); Intel® Xeon® E5-2640 v4 (2.4 GHz, 25 MB cache, 10 cores, Intel® vPro™); Intel® Xeon® E5-2637 v4 (3.5 GHz, 15 MB cache, 4 cores, Intel® vPro™); Intel® Xeon® E5-2630 v4 (2.2 GHz, 20 MB cache, 12 cores, Intel® vPro™); Intel® Xeon® E5-2609 v4 (1.7 GHz, 20 MB cache, 8 cores, Intel® vPro™); Intel® Xeon® E5-2603 v4 (1.7 GHz, 15 MB cache, 6 cores, Intel® vPro™); Intel® Xeon® E5-2620 v4 (2.1 GHz, 20 MB cache, 8 cores, Intel® vPro™); Intel® Xeon® E5-2699 v3 (2.3 GHz, 45 MB cache, 18 cores, Intel® vPro™); Intel® Xeon® E5-2690 v3 (2.6 GHz, 30 MB cache, 12 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® E5-2660 v3 (2.6 GHz, 25 MB cache, 10 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® E5-2680 v3 (2.5 GHz, 30 MB cache, 12 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® E5-2620 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
Maximum Memory	1 TB DDR4-2400 ECC registered SDRAM ¹⁰ Transfer rates up to 2400 MT/s. Only registered and load-reduced memory is supported.
Memory Slots	8 DIMM (with 1 processor) and 16 DIMM (with 2 processors)
Drive Controllers	Integrated SATA 6.0 Gb/s; Integrated LSI SAS 2308 with RAID; LSI MegaRAID® 9270-8i SAS 6.0 Gb/s ROC RAID Card and iBBU09 Battery Backup Unit (optional); Factory integrated RAID available for SATA/SAS drives (RAID 0, 0 Data, 1, 5, and 10); Factory integrated RAID available for PCIe SSDs (RAID 0 Data)
Internal Storage	300 GB up to 1.2 TB SAS (10000 rpm) ⁷ 500 GB up to 4 TB SATA (7200 rpm) ⁷ up to 500 GB SATA SED (7200 rpm) ⁷ 128 GB up to 2 TB SATA SSD ⁷ 256 GB up to 512 GB SATA SED SSD ⁷ up to 1 TB (8 GB cache) SATA SSHD (7200 rpm) ⁷ 256 GB up to 1 TB HP Z Turbo Drive G2 (NVMe PCIe SSD) ⁷
Optical Storage	Slim SATA DVD-ROM; Slim SATA BD-XL Blu-ray writer; Slim SATA DVD-Writer ^{8,9}
Additional Storage	15-in-1 media card reader (optional); HP DX115 Removable HDD Frame/Carrier (optional)
Available Graphics	Professional 2D: NVIDIA® NVS™ 510 (2 GB); NVIDIA® NVS™ 315 (1 GB); NVIDIA® NVS™ 310 (512 MB) Entry 3D: AMD FirePro™ W2100 (2 GB); NVIDIA® Quadro® P600 (2 GB GDDR5 dedicated); NVIDIA® Quadro® K420 (2 GB); NVIDIA® Quadro® K620 (2 GB) Mid-range 3D: AMD FirePro™ W5100 (4 GB); AMD FirePro™ W4300 (4 GB); NVIDIA® Quadro® P2000 (5 GB); NVIDIA® Quadro® M2000 (4 GB); NVIDIA® Quadro® K2200 (4 GB); NVIDIA® Quadro® K1200 (4 GB) High-end 3D: AMD Radeon™ Pro WX 7100 (8 GB); AMD FirePro™ W7100 (8 GB); AMD Radeon™ Pro WX 4100 (4 GB); NVIDIA® Quadro® P6000 (24 GB); NVIDIA® Quadro® P5000 (16 GB); NVIDIA® Quadro® P4000 (8 GB); NVIDIA® Quadro® M6000 (24 GB); NVIDIA® Quadro® M5000 (8 GB); NVIDIA® Quadro® M4000 (8 GB); NVIDIA® Quadro® GP100 (16 GB) ¹⁶
Audio	Integrated IDT 92HD94 audio
Communications	Integrated Intel I210AT PCIe GbE; Integrated Intel I218LM PCIe GbE; Intel Ethernet I210-T1 PCIe NIC (optional); HP X540-T2 10 GbE Dual Port Adapter (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 Z760 802.11a/b/g/n PCIe WLAN (optional) ¹¹
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 x4 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 a shrouded 9-pin connector.
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; HP Wireless Business Slim Keyboard; HP USB Business Slim Keyboard; HP PS/2 Business Slim Keyboard ¹² ; 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; 3Dconnexion CADMouse; HP USB Hardened Mouse ¹²
Software	HP Performance Advisor; Cyberlink Media Suite & PowerDVD; Foxit PhantomPDF Express; Buy Office; HP Remote Graphics Software (RGS) ¹⁵
Security	HP Chassis Intrusion Sensor; TPM 1.2 certified; HP Keyed Cable Lock (optional)
Power	850 W 88% efficient, wide-ranging, active PFC; 1125 W 90% efficient, wide-ranging, active PFC
Dimensions	20.3 x 52.5 x 44.4 cm
Weight	21.1 kg
Environmental Certification	Low halogen ¹⁴
Compatible Displays	All HP Z Displays and HP DreamColor Displays are supported. For more information see www.hp.com/go/zdisplays .
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® registered configurations available ¹³
Warranty	On-site limited warranty and service with 3 year limited warranty and service offering delivers on-site, next business-day service for parts and labor and includes free telephone support 8 am - 5 pm. Global coverage ensures that any product purchased in one country and transferred to another, non-restricted country will remain fully covered under the original warranty and service offering

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Recommended Accessories and Services

HP DreamColor Z24x Display



Enjoy pure, consistent color accuracy from design to production with push-button color space selection and easy color calibration on the amazingly affordable HP DreamColor Z24x Display.

Product number: E9Q82A4

HP SpacePilot Pro USB 3D Input Device



HP and 3Dconnexion bring an outstanding combination together with 3Dconnexion's premier 3D mouse, the SpacePilot Pro, and HP delivering one stop shopping and support. Unlike situations that sometimes occur when you buy a 3rd party accessory and then find issues between the accessory and the computer which can leave you caught in the middle, this HP version of the SpacePilot Pro is wholly supported by HP.

Product number: WH343AA

HP 5-year Next Business Day Onsite Workstation Only Hardware Support



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. For more information on Care Pack services, please visit www.hp.com/go/cpc.

Product number: U7944E

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, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.microsoft.com>.
- ² Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ³ 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.

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, software or BIOS update to take full advantage of Windows functionality. Windows 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. 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 10 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 Not all features are available in all editions or versions of Windows. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS update to take full advantage of Windows functionality. See <http://www.microsoft.com>.
- ⁵ Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
- ⁶ 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.
- ⁷ For hard drives and solid state drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB of system disk is reserved for system recovery software.
- ⁸ 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.
- ⁹ 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.
- ¹⁰ For systems installed with Microsoft Windows 7 (Ultimate, Enterprise or Professional), the maximum accessible system memory is 192 GB. For systems installed with Microsoft Windows 8.x (Enterprise or Pro), the maximum accessible system memory is 512 GB.
- ¹¹ 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.
- ¹² Optional or add-on feature
- ¹³ EPEAT® Gold registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country. Search keyword generator on HP's 3rd party option store for solar energy accessory at www.hp.com/go/options.
- ¹⁴ External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.
- ¹⁵ HP Performance Advisor and HP Remote Graphics Software requires Windows and an internet connection.
- ¹⁶ HP VR Ready Configurations available

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