HP Z4 G4 Workstation

Perfect for engineering, visualization and Machine Learning, HP's most popular workstation delivers disruptive performance for a wide spectrum of applications. With a choice of Intel® Xeon® or Core™ X processors, and support for dual extreme graphics, you get all you need, nothing more.

HP recommends Windows 10 Pro.

Feature-rich functionality

The Z4 is ahead of its time with more standard features than any other single processor HP workstation. With multiple configuration options, you can choose the perfect blend of components that meet your performance requirements.

Visualization powerhouse

Visualize your project anytime with the power to move seamlessly between 3D CAD, rendering and simulation applications. The Z4 can easily handle tasks that require high frequency processing, multiple cores and high-powered GPUs for an optimized design process.

HP's most secure workstations

Advanced security features come standard on every Z4. Rest assured your device, identity and data are safe with security software like HP Client Security Suite Gen3[2] and HP Sure Start Gen3[10] featuring a self-healing BIOS.

Featuring

- Support your unique user needs with a choice of Windows 10 Pro 64 or Linux® operating systems.[1]
- Run demanding professional apps with the newest generation Intel® Xeon® processors available with up to 18 cores for powerful performance and productivity.
- Experience disruptive price-performance on multi-threaded applications, or combined workflows such as simulation based design, with Intel® Core™ X-Series processors: the high-performance single-socket processors from Intel®.[8]
- Get serious about graphics and reach peak productivity with access to a breadth of NVIDIA® and AMD professional graphics from entry to high-end 3D.[4]
- Install pro-grade storage hardware and elevate your storage-bound apps without sacrificing standard PCIe slots.
- The simply stunning design features front and rear handles, so you can easily relocate your system.
- Save space within your office layout with a chassis that is 10% smaller than the previous generation.
- Multiple high-speed network connections are easy and speedy with dual embedded 1GbE LAN ports with Thunderbolt™ 3 technology for fast data transfers.[6,9]
- The optional dual front I/O USB 3.1 G2 Type C™ module lets you transfer data to devices using modern connection technology at higher data rates.[5]
- Optional self-encryption drives thwart outside access so your valuable IP won't fall into the wrong hands.[4]

HP Z4 G4 Workstation Specifications Table

Operating System	Windows 10 Pro for Workstations 64 - HP recommends Windows 10 Pro [1,21,24]
	Windows 10 Pro 64 [1,21,25]
	Red Hat® Enterprise Linux®
	(HP Linux® Installer Kit includes drivers for 64-bit versions of Red Hat® Enterprise Linux® 7.4, SUSE Linux® Enterprise Desktop 12 and Ubuntu 16.04. Red Hat® Enterprise Linux® (1-year paper license only) is available as a second operating system.)
Processor Family [26,30]	Intel® Xeon® W processor; Intel® Core™ X-Series processor
Processors[2,3,29]	Intel® Xeon® W2195 (2.3 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 24.75 MB cache, 18 cores)
	Intel® Xeon® W2175 (2.5 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 19.25 MB cache, 14 cores)
	Intel® Xeon® W2155 (3.3 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 13.75 MB cache, 10 cores)
	Intel® Xeon® W2145 (3.7 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 11 MB cache, 8 cores)
	Intel® Xeon® W2135 (3.7 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores)
	Intel® Xeon® W2133 (3.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores)
	Intel® Xeon® W2125 (4 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 4 cores)
	Intel® Xeon® W2123 (3.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 4 cores)
	Intel® Xeon® W2104 (3.2 GHz, 8.25 MB cache, 4 cores)
	Intel® Xeon® W2102 (2.9 GHz, 8.25 MB cache, 4 cores)
	Intel® Core™ i9 9980XE (3 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 24.75 MB cache, 18 cores)
	Intel® Core™i9 9920X (3.5 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 19.25 MB cache, 12 cores)
	Intel® Core™ i9 9820X (3.3 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Max Technology 3.0, 16.5 MB cache, 10 cores)
	Intel® Core™ i7 9800X (3.8 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 16.5 MB cache, 8 cores)
	Intel® Core™ i9-7980XE (2.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 24.75 MB cache, 18 cores)
	Intel® Core™ i9-7960X (2.8 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 22.0 MB cache, 16 cores)
	Intel® Core™ i9-7940X (3.1 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 19.25 MB cache, 14 cores)
	Intel® Core™ i9-7920X (2.9 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Max Technology 3.0, 16.5 MB cache, 12 cores)
	Intel® Core™ i9-7900X (3.3GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Max Technology 3.0, 13.75 MB cache, 10 cores)
	Intel® Core™ i7-7820X (3.6 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Max Technology 3.0, 11.0 MB cache, 8 cores)
	Intel® Core™ i7-7800X (3.5 GHz base frequency, up to 4 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores)
Chipset	Intel® C422; Intel® X299 [26]
Maximum Memory	256 GB DDR4-2666 ECC SDRAM (for Intel® Xeon® configurations); 128 GB DDR4-2666 non-ECC SDRAM (for Intel® Core™ X configurations) [8]
	(Transfer rates up to 2666 MT/s.)
Memory Slots	8 DIMM
Drive Controllers	Integrated SATA 6.0 Gb/s supporting RAID 0, 1, 5, 10; Optional SAS controller supporting RAID, 0, 1, 10 for SAS drives
Internal Storage	300 GB SAS (15000 rpm) [4,23]
	500 GB up to 2 TB SATA (7200 rpm) [4]
	500 GB SATA SED (7200 rpm) [4]
	1 TB up to 6 TB 7200 rpm SATA Enterprise [4]
	256 GB up to 2 TB SATA SSD [4]
	256 GB up to 512 GB SATA SED Opal 2 SSD [4]
	240 GB up to 480 GB SATA Enterprise SSD [4]
	256 GB up to 1 TB HP Z Turbo Drive PCIe® NVMe™ SSD [4]
	256 GB up to 2 TB HP Z Turbo Drive PCIe® NVMe™ SSD M.2 [4]
	256 GB up to 512 GB HP Z Turbo Drive PCIe® NVMe™ SED SSD M.2 [4]
	256 GB up to 4 TB HP Z Turbo Drive Quad Pro PCIe® SSD [4,24]
	256 GB up to 8 TB HP Z Turbo Drive Dual Pro PCIe® SSD [4,24]
Optical Storage	HP Slim DVD-ROM; HP Slim Blu-ray Writer; HP Slim DVD-Writer [5,6]
Additional Storage	HP SD 4 Media Card Reader (optional)
Available Graphics	Entry 3D: AMD FirePro™ W2100 Graphics (2 GB DDR3 dedicated); NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated)
	Mid-range 3D: AMD Radeon™ Pro WX 3100 Graphics (4 GB GDDR5 dedicated); NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P2000 (5 GB GDDR5 dedicated)
	High-end 3D: NVIDIA® Quadro® P4000 (8 GB GDDR5 dedicated); AMD Radeon™ Pro WX 7100 Graphics (8 GB GDDR5 dedicated)
	Ultra High-end 3D: NVIDIA® Quadro® SYNC II; NVIDIA® Quadro® RTX 6000 (24 GB GDDR6 dedicated); NVIDIA® Quadro® RTX 5000 (16 GB GDDR6 dedicated); NVIDIA® Quadro® P6000 (24 GB GDDR5X dedicated); NVIDIA® Quadro® P5000 (16 GB GDDR5X dedicated); NVIDIA® Quadro® GV100 (32 GB GDDR5 dedicated); NVIDIA® Quadro® GP100 (16GB HBM2 dedicated); AMD Radeon™ Pro WX 9100 graphics (16GB dedicated)
Audio	Integrated Realtek HD ALC221
Networking	LAN: Integrated Intel® I219-LM PCIe® GbE; Integrated Intel® I210-AT PCIe® GbE; Intel® I350-T2 dual-port GbE NIC; Intel® I350-T4 dual-port GbE NIC; Intel® I210-T1 PCIe® GbE; Intel® X550-T2 dual-port GbE NIC; Intel® X710-DA2 dual-port GbE NIC; Intel® 10 GbE SFP+ SR transceiver [20]
	WLAN: Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™
Expansion Slots	2 PCIe 3 x4; 2 PCIe 3 x4, 1 M.2 PCIe 3 x4, 1 PCIe x8, 2 PCIe x16 (for Intel® Core™ i9-X configurations); 2 PCIe 3 x4, 1 M.2 PCIe 3 x4, 1 PCIe x8 (mechanical only), 1 PCIe x16 (x8 electrical), 1 PCIe x16 (for Intel® Core™ i7-X configurations)
Ports and Connectors	Front: 1 headset connector; 4 USB 3.1 (1 charging)
	Front (Premium version): 1 headset connector; 2 USB 3.1 Gen 2 Type-C™; 2 USB 3.1 Gen1 (1 charging)
	Rear: 1 audio-in; 1 audio-out; 1 PS/2 keyboard port; 1 PS/2 mouse port; 1 serial; 2 RJ-45 (1 GbE); 6 USB 3.1 Gen 1
	(The Intel® Core™ X-Series processor configurations only have one RJ45 port and 5 Rear USB 3.1 Gen 1 ports available. The serial port is optional.)

Drive Bays (Internal)	Two 2.5" or 3.5"[16]
Drive Bays (External)	Two 5.25"
Input Device	HP PS/2 Business Slim Keyboard; HP USB Business Slim Keyboard; USB Premium wired keyboard; USB Smart Card (CCID) keyboard[10] 3Dconnexion CADMouse; HP USB Optical Mouse; HP PS/2 Mouse; HP USB Hardened Mouse[10]
Software	HP Remote Graphics Software (RGS); HP Performance Advisor [13,31]
Security	Full volume encryption; HP Keyed Cable Lock Kit; HP Secure Erase; HP Sure Start Gen3; Kensington lock slot; Secure authentication; TPM 2.0 certified; HP Device Access Manager; HP Sure Click; HP BIOSphere Gen3; HP Client Security Manager Gen3; HP MIK/SCCM Gen2; Self Encrypting Drive (SED) [7,14,15,17,18,28]
Power	1000 W internal power supply, up to 90% efficiency, active PFC; 465 W internal power supply, up to 90% efficiency, active PFC; 750 W internal power supply, up to 90% efficiency, active PFC [19,22]
Dimensions (W x D x H)	15.2 x 6.65 x 17.5 in 38.6 x 16.9 x 44.5 cm
Weight	Starting at 22.4 lb Starting at 10.2 kg
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® Gold registered configurations available [11]
Environmental Certification	Low halogen[12]
Compatible Displays	All HP Z Displays and HP DreamColor Displays are supported. For more information see www.hp.com/go/zdisplays.
Warranty	Protected by HP Services, including a 3 years parts, 3 years labor, and 3 years onsite service (3-3-3) standard limited warranty. Certain restrictions. 24/7 operation will not void the HP warranty.

HP Z4 G4 Workstation

Recommended accessories and services (not included)

HP Z Premium Front I/O 2xUSB-A 2xUSB-C		Use the HP Z Premium Front I/O 2xUSB-A 2xUSB-C to quickly and easily upgrade your HP Z4, Z6 or Z8 G4 Workstation standard front I/O ports from 4x USB 3.1 Gen 1 Type A ports to 2x higher-bandwidth USB 3.1 Gen 2 Type-C™ ports for modern peripheral compatibility and 2x USB 3.1 Gen 1 Type A ports. Product number: 1XM32AA
HP Z Turbo Drive Quad Pro 2x512GB PCIe SSD		Power through your largest data challenges and get amazing performance with the HP Z Turbo Drive Quad Pro, which integrates up to four super-fast HP Z Turbo Drive G2 modules[1] into one PCIe x16 card. Product number: N2M99AA
NVIDIA Quadro P5000 (16GB) Graphics Card		Work with large models and rendering tasks and complex simulations and add more life-like VR experiences to your workflow today while preparing for the challenges of tomorrow with the NVIDIA® Quadro® P5000 workstation graphics card, powered by NVIDIA Pascal™ GPU technology. Product number: Z0B13AA
AMD Radeon Pro WX 7100 8GB Graphics Card		Meet your demanding Design & Manufacturing and Media & Entertainment VR and immersive computing workflows head on with the AMD Radeon™ Pro WX 7100, a single slot form factor card based on AMD's new Polaris architecture. Product number: Z0B14AA
HP Z38c 37.5-inch Curved Display		Completely immerse yourself in the expansive elegance of the HP Z38c Curved Display. Form meets function with crisp, panoramic views so you can stay focused on your work. Product number: Z4W65A4
HP 5 year Next Business Day Onsite HW Support w/Defective Media Retention for Workstations		When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day[1] Onsite Service with Defective Media Retention, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work. Product number: U1G57E

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.windows.com.
[2] HP Client Security Suite Gen3 requires Windows and Intel® or AMD 7th Gen processors.
[4] 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.
[5] Sold separately or as an optional feature.
[6] HP Z Premium Front I/O 2xUSB-A 2xUSB-C is sold separately or as an optional feature.
[8] Windows 10 Pro is preinstalled. Windows 7 is not supported on the Intel® Core™ X - Series processor configurations. Configurations with the Intel® Core™ X processors support only a subset of the full features of the Z4 G4 system, including, but not limited to: memory type and maximum memory, PCIe slot configurations, M.2 storage capacity, GbE interface and manageability features. Please refer to the product QuickSpecs for complete details.
[9] Dual embedded 1GbE LAN ports on Intel® Xeon® processor configurations; single embedded 1GbE LAN ports on Intel® Core™ X processor configurations.
[10] HP Sure Start Gen3 is available on HP EliteBook, HP ZBook, and HP Z Workstation products equipped with Intel® 7th generation processors.
Screen image courtesy of Renault Sport Racing.
Screen image courtesy of Chris McLennan.

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.windows.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] Some Intel® 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. Intel vPro is supported only with Intel® Xeon™ configurations.
[4] 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.
[5] 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. No support for DVD RAM.
[6] 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.
[7] HP Client Security Manager G3 - Requires Windows and Intel® 7th or 8th generation processors.
[8] For systems installed with Microsoft Windows 7 (Ultimate, Enterprise or Professional), the maximum accessible system memory is 192 GB. Windows 7 is not supported on the Intel® Core XTM - Series processor configurations. Windows 7 is not supported on the Intel® Core XTM - Series processor configurations. For systems installed with Microsoft Windows 8.x (Enterprise or Pro), the maximum accessible system memory is 512 GB.
[9] Wireless access point and Internet access required. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.
[10] Optional or add-on feature.
[11] EPEAT® 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 generator accessories at http://www.hp.com/go/options www.hp.com/go/options
[12] External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.
[13] HP Remote Graphics Software requires network connection. Performance dependent on network latency and image frame content.
[14] HP BIOSphere G3 requires Intel® 7th generation processors.
[15] HP Secure Erase: For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method.
[16] Each bay is configurable to 2.5" or 3.5".
[17] HP MIK/SCCM - HP Manageability Integration Kit can be downloaded from http://www.hp.com/go/clientmanagement.
[18] HP Keyed Cable Lock Kit is available only as an aftermarket option.
[19] Available the first half of 2018.
[20] I210-AT, I219-V are available in Intel® Xeon® configurations only.
[21] In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on http://www.support.hp.com.
[22] 465W and 750W power supply options are only available for Intel® Xeon® configurations.
[23] Supported only on Intel ® Xeon® configurations: Not supported with Intel® Core XTM processor configurations.
[24] Available on Intel® Xeon® W processor configurations only.
[25] Available on Intel® Core™ X-Series processor configurations only.
[26] Choice of Intel Core X processor family will affect other configuration choices and system feature set availability; refer to the product Quickspecs for details.
[27] Intel® C422 for Intel® Xeon® configurations, Intel® X299 for Intel® Core™ X configurations.
[28] HP Sure Click is available on most HP PCs and supports Microsoft® Internet Explorer, Google Chrome, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode, when Microsoft Office or Adobe Acrobat are installed.
[29] 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.
[30] Your product does not support Windows 8 or Windows 7. In accordance with Microsoft's support policy, HP does not support the Windows® 8 or Windows 7 operating system on products configured with Intel® and AMD 7th generation and forward processors or provide any Windows® 8 or Windows 7 drivers on http://www.support.hp.com
[31] HP Performance Advisor – Internet access required.

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