Data sheet

HP Z6 G4 Workstation

A future-proof powerhouse

No matter what the future holds, you'll have all the performance you need. Ideal for VFX and rendering, this workhorse offers a wide range of processing power and the flexibility to upgrade components over time.

*Product image may differ from actual product

HP recommends Windows 11 Pro for business

Designed to grow with you
- Invest only in the technology you need today, and easily upgrade in the future. Scale up with a broad range of configurations from single or dual processors to multiple graphics cards.

Relentless power
- Take on demanding workloads with high-powered processors, professional graphics and 768 GB of memory. Experience seamless performance during graphics-intensive work, such as visual effects and design visualization.

HP's most secure workstations
- Advanced security features come standard on every Z6. Rest assured your device, identity and data are safe with security software like HP Client Security Suite[2] and HP Sure Start, the industry's first self-healing BIOS with intrusion detection.

Featuring
- Support your unique user needs with a choice of Windows 10 Pro or Linux® operating systems.[1]
- Achieve the performance you need with the ability to support two next generation Intel® Xeon® processors for up to 52 total processor cores in one system.[3]
- Get serious about graphics and reach peak productivity with access to a breadth of NVIDIA® and AMD professional graphics from entry to ultra 3D.[4]
- Install the fastest professional grade storage hardware around, unlocking performance for storage-bound applications without sacrificing standard PCIe slots.
- The Z6 workstation's sleek, iconic design doesn't compromise on quiet, reliable performance.
- HP SureStart automatically detects intrusions in real-time, notifies you, and restores the BIOS you use, so you can breathe easier.
- Create two network connections without the added cost of a PCIe NIC with dual embedded 1GbE LAN ports which come standard.
- 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]
- Super fast network connenctions[6,7]
- Optional self-encryption drives thwart outside access so your valuable IP won't fall into the wrong hands.[4]
- Future-proof your Z with Intel® Optane™ DC Persistent Memory for the best price/performance with the ability to load large data sets entirely into memory for fast access and application responsiveness.[8]

HP Z6 G4 Workstation Specifications Table

*Product image may differ from actual product

Available Operating Systems	Windows 11 Pro for Workstations[1,21,22] Windows 10 Pro for Workstations[1,21,22] Ubuntu 20.04 LTS[25] HP Installer Kit for Linux®[23] Red Hat® Enterprise Linux®[23] (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	Intel® Xeon® Scalable processor
Available Processors[2,3]	Intel® Xeon® Silver 4214R (2.4 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 16.5 MB L3 cache, 12 cores); Intel® Xeon® Silver 4215R (3.2 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 11 MB L3 cache, 8 cores); Intel® Xeon® Silver 4216 (2.1 GHz base frequency, up to 3.2 GHz with Intel® Turbo Boost Technology, 22 MB L3 cache, 16 cores); Intel® Xeon® Gold 5118 (2.3 GHz base frequency, up to 3.2 GHz with Intel® Turbo Boost Technology, 16.5 MB L3 cache, 12 cores); Intel® Xeon® Gold 5215 (2.5 GHz base frequency, up to 3.4 GHz with Intel® Turbo Boost Technology, 13.75 MB L3 cache, 10 cores); Intel® Xeon® Gold 5218 (2.3 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 22 MB L3 cache, 16 cores); Intel® Xeon® Gold 5218R (2.1 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 27.5 MB L3 cache, 20 cores); Intel® Xeon® Gold 5220R (2.2 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 35.75 MB L3 cache, 24 cores); Intel® Xeon® Gold 5222 (3.8 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 16.5 MB L3 cache, 4 cores); Intel® Xeon® Gold 6128 (3.4 GHz base frequency, up to 3.7 GHz with Intel® Turbo Boost Technology, 19.25 MB L3 cache, 6 cores); Intel® Xeon® Gold 6136 (3.0 GHz base frequency, up to 3.7 GHz with Intel® Turbo Boost Technology, 24.75 MB L3 cache, 12 cores); Intel® Xeon® Gold 6226 (2.7 GHz base frequency, up to 3.7 GHz with Intel® Turbo Boost Technology, 19.25 MB L3 cache, 12 cores); Intel® Xeon® Gold 6226R (2.9 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 22 MB L3 cache, 16 cores); Intel® Xeon® Gold 6230R (2.1 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 35.75 MB L3 cache, 26 cores); Intel® Xeon® Gold 6234 (3.3 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 24.75 MB L3 cache, 8 cores); Intel® Xeon® Gold 6238R (2.2 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 38.5 MB L3 cache, 28 cores); Intel® Xeon® Gold 6240 (2.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 24.75 MB L3 cache, 18 cores); Intel® Xeon® Gold 6240R (2.4 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 35.75 MB L3 cache, 24 cores); Intel® Xeon® Gold 6242 (2.8 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 22 MB L3 cache, 16 cores); Intel® Xeon® Gold 6242R (3.1 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 35.75 MB L3 cache, 20 cores); Intel® Xeon® Gold 6244 (3.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 24.75 MB L3 cache, 8 cores); Intel® Xeon® Gold 6246R (3.4 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 35.75 MB L3 cache, 16 cores)
Chipset	Intel® C622
Maximum memory	384 GB DDR4-2666 ECC RAM; 768 GB DDR4-2933 ECC RAM [20] Transfer rates up to 2933MT/s.
Memory slots	12 DIMM with 2 processors
Internal storage	up to 300 GB SAS (15000 rpm)[4] 500 GB up to 2 TB SATA (7200 rpm)[4] up to 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 1 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 8 TB HP Z Turbo Drive Quad Pro PCIe® SSD[4] 256 GB up to 4 TB HP Z Turbo Drive Dual Pro PCIe® SSD[4]
Additional storage	HP SD 4 Media Card Reader (optional)
Optical drive	HP Slim DVD-ROM; HP Slim Blu-ray Writer; HP Slim DVD-Writer [5,6]
Available Graphics	Entry 3D: NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated); NVIDIA® T600 (4 GB GDDR6 dedicated); NVIDIA® T400 (2 GB GDDR6 dedicated) Mid-range 3D: AMD Radeon™ Pro WX 3200 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P2000 (5 GB GDDR5 dedicated); NVIDIA® Quadro® P2200 (5 GB GDDR5X dedicated); NVIDIA® Quadro® T1000 (4 GB GDDR6 dedicated); NVIDIA RTX™ A2000 (6 GB GDDR6 dedicated) High-end 3D: NVIDIA® Quadro RTX™ 4000 (8 GB GDDR6 dedicated); NVIDIA RTX™ A4000 (16 GB GDDR6 dedicated); AMD Radeon™ Pro W5500 (8 GB GDDR5 dedicated); AMD Radeon™ Pro W5700 (8 GB GDDR5 dedicated); NVIDIA RTX™ A4500 (20 GB GDDR6 dedicated) Ultra High-end 3D: NVIDIA® Quadro® SYNC II; NVIDIA® Quadro RTX™ 5000 (16 GB GDDR6 dedicated); NVIDIA® Quadro RTX™ 6000 (24 GB GDDR6 dedicated); NVIDIA® Quadro RTX™ 8000 (48 GB GDDR6 dedicated); NVIDIA® RTX™ A5000 (24 GB GDDR6 dedicated); NVIDIA RTX™ A6000 (48 GB GDDR6 dedicated); AMD Radeon™ Pro W6800 (32 GB GDDR6 dedicated)[7,17,20]
Expansion slots	3 PCIe x4; 1 PCIe x8; 2 PCIe x16; 2 M.2 PCIe x4 (Slot 1: CPU with open-ended connector. Slots 3 and 6: PCH with open-ended connector. Slot 4: CPU with open-ended connector (slot converts to x4 electrical when SSD is installed in 2nd M.2 slot). M.2 Slots 1 and 2: CPU up to 80 mm storage devices.)
Ports and Connectors	Front: 1 headset connector; 4 USB 3.1 (1 charging) ; Rear: 6 USB 3.1 Gen 1; 2 RJ-45 (1 GbE); 1 audio-in; 1 audio-out; 1 PS/2 mouse port; 1 PS/2 keyboard port; 1 serial ; (Premium front includes: 1 headset, 2 USB 3.1 Gen1 (1 charging), 2 USB 3.1 Gen 2 Type-C™.)
Input devices	HP Wireless Business Slim Keyboard and Mouse Combo; 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];
Communications	LAN: HP dual-port 10GBase-T NIC; Integrated Intel® I219-LM PCIe® GbE; Integrated Intel® X722 PCIe® GbE; Intel® 10 GbE SFP+ SR transceiver; Intel® I210-T1 PCIe® GbE; Intel® I350-T4 dual-port GbE NIC; Intel® X550-T2 dual-port GbE NIC; Intel® X710-DA2 dual-port GbE NIC; Intel® I350-T2 GbE NIC [19]; WLAN: Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro™ ;
Drive Bays	Two 5.25"; Two 2.5" or 3.5" [16]
Software	HP Performance Advisor; HP Remote Graphics Software (RGS);
Security management	HP Sure Start Gen3; Secure authentication; Kensington lock slot; Full volume encryption; HP Keyed Cable Lock Kit; TPM 2.0 certified; HP Secure Erase;[14,15,18]
Power	1000 W internal power supply, up to 90% efficiency, active PFC; 700 W internal power supply, up to 90% efficiency, active PFC
Dimensions	16.9 x 46.5 x 44.5 cm
Weight	Starting at 13.1 kg (Exact weight depends on configuration.)
Ecolabels	EPEAT® registered configurations available; TCO Certified configurations available[11,26]
Energy star certified (series fixed)	ENERGY STAR® certified
Sustainable impact specifications	Low halogen[12]
Compatible displays	All HP Z Displays and HP DreamColor Displays are supported.
Warranty	3 year (3-3-3) limited warranty and service offering includes 3 years of parts, labor and on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.

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Accessories and services (not included)

HP 5 year Next Business Day Onsite Hardware Support for Workstations

Receive 5 years of next business day onsite HW Support from an HP-qualified technician for your computing device, if the issue cannot be solved remotely.
Product number: U7944E

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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 features vary by platform.
[3] 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 is not a measurement of higher performance.
[4] Sold separately or as an optional feature.
[5] HP Z Premium Front I/O 2xUSB-A 2xUSB-C is sold separately or as an optional feature.
[6] HP dual-port 10GBase-T NIC is sold separately or as an optional feature.
[7] Available in the first half of 2019.
Screen image courtesy of Chris McLennan
Screen image courtesy of Renault Sport Racing
[8] Supported only with Xeon 82xx, 62xx, 52xx and 4215 processors. Available as factory configured in Memory Mode or Storage Mode. See Quick Specs for more information.

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 is automatically updated and enabled. High speed internet and Microsoft account required. 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 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.
[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 VR Ready Configurations available.
[8] 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.
[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] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.
[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 a Windows, Linux®, or Mac®OS X 10.10 and newer operating system and network access.
[14] HP Sure Start Gen3 is available on HP EliteBook, HP ZBook, and HP Z Workstation products equipped with Intel® 7th generation processors.
[15] HP Secure Erase: For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88. Supported on Elite platforms with BIOS version F.03 or higher.
[16] Each bay is configurable to 2.5" or 3.5".
[17] NVIDIA® Quadro® SYNC II sold separately
[18] HP Keyed Cable Lock Kit is available only as an aftermarket option.
[19] HP dual-port 10GBase-T NIC is sold separately or as an optional feature.
[20] Available in the first half of 2019.
[21] Windows 11 Pro and Windows 10 Pro is preinstalled. Windows 7 media is only available upon request from HP Customer Support. 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.
[22] NOTE: 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 .
[23] Notes: For detailed Linux® OS/hardware support information, see: http://www.hp.com/support/linux_hardware_matrix
[24] Intel® I350-T4 dual/quad-port GbE NIC is sold separately or as an optional feature.
[25] Not all features are available in all editions or versions of Ubuntu. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS to take full advantage of Ubuntu functionality. Ubuntu may be automatically updated. ISP fees may apply and additional requirements may apply over time for updates.
[26] TCO Certified configurations available when ENERGY STAR configurations are selected with a USB Type-C® connector. ENERGY STAR available with a combination of high-performance CPU's, high-performance GPU's and select memory configurations.

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