

HP Workstation Z8 G4 Tower (643X1UT)



HP's most powerful desktop workstation [2]

Top-of-the-line power to fuel those who reimagine our world. When you need a workstation with the capability to run complex simulations, handle advanced Machine Learning algorithms and process huge amounts of data, the HP Z8 doesn't disappoint.



HP recommends Windows 11 Pro for business

Extreme power

Run 3D simulations and edit 8K video in real time with up to 56 processing cores and up to 1.5 TB high-speed memory. Certified for serious software, such as ANSYS or After Effects, you can ideate and iterate more to deliver better work in less time.

Industry-leading design and acoustics

From the inside out, the Z8 is an engineering wonder. The modern exterior provides tool-free access to a clean, modular interior. Strategically placed vents and ducts throughout the system streamline airflow for ultra-quiet performance.

HP's most secure workstations

Advanced security features come standard on every Z8. Rest assured your device, identity and data are safe with security software like HP Client Security Suite Gen3[3] and HP Sure Start Gen3[8], the industry's first self-healing BIOS with intrusion detection.

Featuring

Intel® Xeon® processor

Get professional-class speed to maximize your performance and uptimes on the most demanding professional workflows with the Intel® Xeon® processor. [4]

Security is your top priority

The HP Wolf Pro Security Edition provides preconfigured enterprise-level PC protection for small and medium sized businesses. [4]

NVIDIA Quadro GV100

Give ML developers high-performance GPU-accelerated algorithm development tools with support for the NVIDIA Deep Learning SDK and many widely used deep learning frameworks.

Memory

Easily handle massive data sets with 24 memory slots supporting up to 3 TB of high-speed memory. [7]

Expandability

Get ultra-flexible configuration with 7 high-performance PCIe Gen3 slots and get additional expandability supporting up to 4 PCIe storage devices with optional slots. [6]

Specifications

Operating system	Windows 11 Pro
Processor family	Intel® Xeon® Gold processor
Processor	Intel® Xeon® Gold 4214R (2.4 GHz base frequency, up to 3.5 GHz with Intel® Turbo Boost Technology, 16.5 MB cache, 12 cores) ^[6,7]
Chipset	Intel® C622
Memory	32 GB DDR4-2933 ECC MHz RAM (4 x 8 GB)
Memory Slots	24 DIMM with 2 processors
Internal Storage	512 GB HP Z Turbo Drive PCIe® SSD
Internal drive bays	Four 2.5" or 3.5"
External drive bays	Two 5.25"
Optical drive	HP 9.5 mm Slim DVD-Writer
Graphics	Discrete
Graphics (discrete)	NVIDIA RTX™ A4000 (16 GB GDDR6 dedicated)
Compatible displays	All HP Z Displays and HP DreamColor Displays are supported.
Minimum dimensions (W x D x H)	21.59 x 55.12 x 44.45 cm
Minimum dimensions (W x D x H)	8.5 x 21.7 x 17.5 in
Weight	Starting at 22.4 kg (Exact weight depends on configuration.)
Weight	Starting at 49.4 lb (Exact weight depends on configuration.)
Keyboard	HP USB Slim Business Keyboard
Pointing device	HP USB wired optical mouse
Ports	1 headset connector; 4 USB 3.1 (1 charging) (Premium front includes: 1 headset, 2 USB 3.1 Gen1 (1 charging), 2 USB 3.1 Gen 2 Type-C™.)
Expansion slots	2 PCIe x4; 3 PCIe x8; 4 PCIe x16 (1 PCIe x8 has rear bulkhead access and 2 PCIe x8 are internal access only. Slot 1: Transforms to PCIe x8 when 2nd CPU is installed. Slots 3 and 6: are available only when 2nd processor is installed. PCIe x16 - Available only when 2nd processor is installed.)
Ports	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
Power	1700 W internal power supply, up to 90% efficiency, active PFC; 1450 W internal power supply, up to 90% efficiency, active PFC; 1125 W internal power supply, up to 90% efficiency, active PFC
Sustainable impact specifications	Low halogen
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]
Software included	HP Performance Advisor; HP Remote Graphics Software (RGS)
UPC number	(ABA) 196548063369; (ABC) 196548063352

Top Recommended Displays, Accessories and Services

Z Displays

HP Z32 31.5-inch 4K UHD Display	1AA81A4
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Keyboards

HP Wireless Premium Keyboard	Z9N41AA
HP USB Premium Keyboard	Z9N40AA

Graphics Cards

NVIDIA Quadro RTX 4000 8GB (3)DP+USBc	5JV89AA
NVIDIA Quadro RTX 8000 48GB (4)DP+USBc	6NB51AA
NVIDIA Quadro GV100 32GB Graphics Card	3ME26AA

DDR4 Memory

HP 8GB (1x8GB) DDR4-2666 ECC Reg RAM	1XD84AA
16GB (1x16GB) DDR4-2666 ECC Reg RAM	1XD85AA
HP 32GB (1x32GB) DDR4-2933 ECC RegRAM	5YZ55AA

PC Solid State Drives

HP Z Turbo Drive 2TB TLC Z8 G4 SSD Kit	3KP40AA
HP Z Turbo Drive Quad Pro 2x512GB PCIe TLC SSD	4YZ39AA

Messaging Footnotes

[2] Based on desktop workstations as of June 14, 2017 and power based on processor, graphics, memory, and power supply.

[3] 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.

[6] Sold separately or as an optional feature.

[7] Available in the first half of 2018.

Technical Specifications Footnotes

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[7] Intel® Turbo Boost performance varies depending on hardware, software and overall system configuration. See <http://www.intel.com/technology/turboboost/> for more information.

[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.

[18] HP Keyed Cable Lock Kit is available only as an aftermarket option.

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