ProductSheet
HP Z8 G5 Workstation (B3NT0UT)

Supercharge processor-intensive workloads.

Harness the incredible CPU performance of the Z8 AI workstation. With its dual-socket design, accelerate intensive multi-threaded workflows, across AI and machine learning model training, real-time ray tracing, and 3D visualization & simulation, with plenty of room to expand as demands change.



Exceptional performance. Extraordinary expandability.
Tackle processor-intensive workflows with up to 64 cores[1] across 2 Intel® Xeon® W CPUs, 2 high-end GPUs[2], and 1 TB DDR5 RAM[3]. Easily expand as work evolves with tool-less access, 7 PCIe slots, and 2 front accessible NVMe bays.[3]

Engineered to stay cool and quiet.
Push your desktop workstation without disruptive noise. Smart fan control keeps the system whisper-quiet by tuning fan speeds in real-time using over 20 temperature sensors. Precisely placed vents and ducts streamline airflow and heat removal.

Ignite AI innovation.
Accelerate AI development and inferencing with the Z8 AI workstation, with up to 2 NVIDIA RTX™ 6000 Ada Generation GPUs[4] delivering up to 2,914 AI TOPS for advanced AI. Process proprietary data securely on a local workstation to gain insights faster.

Featuring

Windows 11
Work anywhere without compromising on performance or security with Windows 11 powered by HP's collaboration and connectivity technology.

Intel® Xeon® processor
Get professional-class speed to maximize your performance and uptimes on the most demanding professional workflows with the Intel® Xeon® processor. [8]

Security is your top priority
The HP Wolf Pro Security Edition provides preconfigured enterprise-level PC protection for small and medium sized businesses.

Professional Grade Graphics
Tackle processor-heavy rendering, machine learning, and data visualization projects.

Ultra Fast Memory Configurations
Power through memory-intensive workloads with fast CPU-dependent rendering, model training and development, and data visualization performance.

Specifications

Form factor	Tower
Operating system	Windows 11 Pro[1]
Processor family	Intel® Xeon® Silver processor
Processor	Intel® Xeon® Silver 4514Y (up to 3.4 GHz with Intel® Turbo Boost Technology, 30 MB L3 cache, 16 cores, 32 threads) [6,7]
Chipset	Intel® C741
Memory	64 GB DDR5-5600 MT/s ECC (4 x 16 GB)
Memory Slots	16 DIMM (with dual processors)
Internal Storage	1 TB HP Z Turbo Drive PCIe® Gen4 TLC M.2 SSD
Internal drive bays	Six PCIe® M.2 SSD; Six 3.5" HDD
External drive bays	Two 9.5 mm ODD
Graphics	Discrete
Graphics (discrete)	NVIDIA RTX™ A1000 (8 GB GDDR6 dedicated)
Compatible displays	All HP Z Displays and HP DreamColor Displays are supported. For more information see http://www.hp.com/go/zdisplays
Audio	Realtek ALC3205-CG
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 22.5 kg *(Exact weights depend upon configuration (System weight only))*
Weight	Starting at 49.6 lb *(Exact weights depend upon configuration (System weight only))*
Keyboard	HP 125 Black Wired Keyboard
Pointing device	HP Wired 320M Mouse
Ports	4 SuperSpeed USB Type-A 5Gbps signaling rate; 1 headphone/microphone combo[31]
Expansion slots	1 PCIe 3 x16; 1 PCIe 3 x8; 2 PCIe 3 x4; 1 PCIe 5 x16; 2 PCIe 4 x16; 2 PCIe 4 x8 *(Rear bulkhead access can be achieved through all slots but 2 PCIe 4 x8 are internal access only for M.2 (1 PCIe 4 x16 available when 2nd CPU is not installed; 1 PCIe 3 x16 available only when 2nd CPU is installed).)*
Ports	6 SuperSpeed USB Type-A 5Gbps signaling rate; 1 audio-in/out; 2 RJ-45 (1 GbE AMT, 1GbE, optional 10GbE)
Package dimensions (W x D x H)	33.2 x 73.4 x 63.6 cm
Package weight	Starting at 27.95 kg
Power	1125 W internal power supply, up to 90% efficiency, active PFC
Energy star certified	ENERGY STAR® certified
Management features	HP Driver Packs; HP System Software Manager (download); HP BIOS Configuration Utility (download); HP Smart Support
Sustainable impact specifications	Low Halogen; 40% post-consumer recycled plastic; 25% ITE-derived closed loop plastic; Bulk packaging available; External power supply 90% efficiency; Plastic cushion inserts contain 80% recycled content; Ocean-bound plastic in system fan; 10% post-industrial recycled metal; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable
Security management	Full volume encryption; HP Secure Erase; Kensington lock slot; Secure authentication; TPM 2.0 certified; HP BIOSphere; HP Sure Run; HP Sure Click; HP Sure Sense; HP Sure Admin; HP Platform Certificate; HP Sure Start; HP Sure Recover; Self-Encrypted Drives[20,21,22,23,24,25,26,27]
Software included	HP PC Hardware Diagnostics UEFI; HP Performance Advisor; HP Support Assistant; HP PC Hardware Diagnostics Windows; HP Image Assistant; HP Manageability Integration Kit; HP Anyware; HP Services Scan; HP Data Science Stack Manager[17,18,19,37]
UPC number	(ABA) 198828651334; (ABC) 198828651341

Top Recommended Displays, Accessories and Services

Speakerphones	
Poly Sync 20+ USB-C Speakerphone	772D0AA
Poly Sync 20 USB-C Speakerphone	7F0J7AA
Poly Sync 10 USB-A USB-C Speakerphone	772C3AA
Wireless Headset	
Poly Voyager Surround 80 UC USB-C Headset +USB-C/A Adapter	8G7T9AA
Poly Voyager Focus 2 USB-C-C Headset +USB-C/A Adapter	9T9J3AA
Wired Headset	
Poly Blackwire 8225 Stereo USB-C Headset +USB-C/A Adapter	8X223AA

Messaging Footnotes

[1] 64 cores is enabled through installation of two CPUs. 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.

[2] Graphics are sold separately or as an optional feature.

[3] Optional, configurable features.

[4] Graphics are sold separately or as an optional feature.

[8] 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.

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.

[6] 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. 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.

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

[17] HP Performance Advisor Software - HP Performance Advisor is ready and waiting to help you get the most out of your HP Workstation from day one—and every day after. Learn more or download at: https://www8.hp.com/us/en/workstations/performance-advisor.html .

[18] HP Support Assistant requires Windows and Internet access.

[19] HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html .

[20] HP Sure Click requires Windows 11 Pro or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

[21] HP Sure Start Gen7 is available on select HP PCs and Workstations. See product specifications for availability.

[22] HP Sure Recover Gen4 is available on select HP PCs and requires an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.

[23] HP Sure Sense requires Windows 11 Pro or Enterprise 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.

[24] HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

[25] HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from http://www.hp.com/go/clientmanagement and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.

[26] HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.

[27] HP BIOSphere Gen6 features may vary depending on the platform and configurations.

[31] Front I/O offers Battery Charging 1.2 through one of the USB Type-A ports.

[37] HP Services Scan is provided with Windows Update on select products and will check entitlement on each hardware device to determine if an HP TechPulse-enabled service has been purchased, and will download applicable software automatically. HP TechPulse is a telemetry and analytics platform that provides critical data around devices and applications. For full system requirements or to disable this feature, please visit http://www.hpdaas.com/requirements . Not applicable in China.

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