HP Z6 G5 A Workstation Desktop PC

Maximized Cores. Astounding Graphics. Unbound Potential



The refreshed HP Z6 G5 A is a powerhouse for AI workflows, 3D rendering and virtual production. Its innovative system design, with a next-gen AMD Ryzen™ Threadripper™ PRO CPU,[1] combines an astounding number of cores in a single CPU with up to 3 GPUs.[2] Create and render at once on intensive projects.

Create, render, process—all at once

Tear through rendering, simulations or 3D modeling. The system design packs up to 96 cores in a single workstation CPU[1] so there's room for up to three high-end GPUs[3] and eight memory channels.[4] And, do it all with efficient performance per watt.

Expandable. Flexible. Whisper Quiet

Designed to pack all the power and components you need now with room to grow. Get maximum expandability with up to 6 PCIe slots (up to gen 5) and 12 NVMe SSDs.[5] Conquer intense projects without throttling on a device designed to run quiet and cool.[6]

Your AI powerhouse, in-house

Accelerate AI development and inferencing with up 3 NVIDIA RTX PRO™ 6000 Blackwell Max-Q Workstation Edition GPUs[7], delivering up to 10,533 TOPS for advanced AI workflows. Process proprietary data securely on a local workstation for fast insights

Designed with the planet in mind

At HP, we care about the impact our products have on our people, communities, and the planet. That's why this device contains 35% recycled plastics[8] and is EPEAT® Gold registered.[9] Take pride knowing that you are helping protect our shared future.

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Operating Systems
Support your unique user needs with a choice of Windows 11 Pro or Linux® operating systems.[10]

AMD Processor
Power the most demanding professional workloads with an AMD Ryzen™ Threadripper™ PRO 9000 WX-Series CPU, delivering incredible performance for increased productivity and to get more done in less time.[1]

Professional Grade Graphics
Tackle virtual production, visual effects, advanced 3D modeling, or AI and machine learning projects with up to 3 NVIDIA RTX™ 6000 Ada or 1 AMD Radeon™ Pro W7900 GPU.[11]

Ultra-Fast Memory Configurations
Accelerate your workflow. Power through memory-intensive workloads with up to 1 TB DDR5 memory at 6400Mhz for fast visual effects, compositing, and rendering performance.[12]

Storage
Flexible storage options include 4 onboard, tool-less M.2 connections and 4 front-accessible, hot-swappable NVMe devices with status information via external LED.[13]

World Class Design & Acoustics
Keep quiet, cool, and focused even at peak performance. Smart fan control keeps the system whisper-quiet by tuning fan speeds in real-time using over 20 temperature sensors.

ISV Certified
Work with confidence knowing your AMD-based workstation is certified by leading software vendors to ensure peak performance even on complex projects.

Fast Data Transfer and Network Connectivity
Available with Thunderbolt™ 4 technology, a USB 3.2 SuperSpeed Type-C® 20 Gbps signaling rate port, and/or two 10 GbE network ports for fast data transfer and network connectivity.[14,15]

HP Anyware software
Access the power of the HP Z6 G5 A AI workstation from any device with HP Anyware software, delivering fast responsiveness and image quality, even under varying network connections.[16]

HP Remote System Controller
When paired with HP Z desktops IT managers can perform out-of-band management tasks such as pre-boot access, BIOS updates, and re-imaging—from anywhere.[17]

Wi-Fi® Enablement
Untether your device from network cables and enjoy the flexibility to place your desktop almost anywhere with new Wi-Fi 6E or integrated Wi-Fi 6 that doesn’t take up a PCIe slot.[18,19]

HP Smart Support with HP TechPulse
Get enhanced support and reduce downtime. HP Smart Support provides support agents, secure access to device health insights, and configuration data for faster troubleshooting.[20]

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Specifications Table

Available Operating Systems	Windows 11 Pro[1,2] Ubuntu 22.04 LTS[3] Linux® Ready[3] Red Hat® Enterprise Linux®[3]
Processor family	AMD Ryzen™ Threadripper™ PRO processor
Available Processors	AMD Ryzen™ Threadripper™ Pro 9995WX (2.5 GHz base clock, up to 5.4 GHz max boost clock, 384 MB L3 cache, 96 cores, 192 threads) AMD Ryzen™ Threadripper™ Pro 9985WX (3.2 GHz base clock, up to 5.4 GHz max boost clock, 256 MB L3 cache, 64 cores, 128 threads) AMD Ryzen™ Threadripper™ Pro 9975WX (4.0 GHz base clock, up to 5.4 GHz max boost clock, 128 MB L3 cache, 32 cores, 64 threads) AMD Ryzen™ Threadripper™ Pro 9965WX (4.2 GHz base clock, up to 5.4 GHz max boost clock, 128 MB L3 cache, 24 cores, 48 threads) AMD Ryzen™ Threadripper™ Pro 9955WX (4.5 GHz base clock, up to 5.4 GHz max boost clock, 64 MB L3 cache, 16 cores, 32 threads) AMD Ryzen™ Threadripper™ Pro 9945WX (4.7 GHz base clock, up to 5.4 GHz max boost clock, 64 MB L3 cache, 12 cores, 24 threads)
Product colour	Black
Form factor	Tower
Maximum memory	1 TB DDR5-6400 MT/s ECC Transfer rates up to 6400 MT/s.
Internal storage	1 TB up to 12 TB 7200 rpm SATA Enterprise HDD[5] 512 GB up to 4 TB HP Z Turbo Drive NVMe™ M.2 SSD[5] 512 GB up to 4 TB HP Z Turbo Drive PCIe® SSD M.2[5] 512 GB up to 4 TB HP Z Turbo Drive PCIe® SED Opal 2 M.2 SSD[5] 512 GB up to 4 TB HP Z Turbo Drive Dual Pro PCIe® SSD[5] 512 GB up to 4 TB HP Z Turbo Drive Quad Pro PCIe® SSD[5,41]
Optical drive	HP Slim DVD-ROM; HP Slim Blu-ray Writer; HP Slim DVD-Writer [6,7]
Available Graphics	Ultra High-End: NVIDIA RTX™ 6000 Ada Generation (48 GB GDDR6 dedicated) AMD Radeon™ Pro W7900 (48 GB GDDR6 dedicated) NVIDIA RTX™ 5000 Ada Generation (32 GB GDDR6 dedicated) NVIDIA® A800 (40 GB GDDR6 dedicated) High-End: NVIDIA RTX™ 4500 Ada Generation (24 GB GDDR6 dedicated) NVIDIA RTX™ A4500 (20 GB GDDR6 dedicated) NVIDIA RTX™ 4000 Ada Generation (20 GB GDDR6 dedicated) NVIDIA RTX™ A4000 (16 GB GDDR6 dedicated) NVIDIA RTX™ 2000 Ada Generation (16 GB GDDR6 dedicated) NVIDIA RTX™ A2000 (12 GB GDDR6 dedicated) AMD Radeon™ Pro W7500 (8 GB GDDR6 dedicated) AMD Radeon™ Pro W7600 (8 GB GDDR6 dedicated)[40] Mid-Range: NVIDIA® T1000 (8 GB GDDR6 dedicated) NVIDIA RTX™ A1000 (8 GB GDDR6 dedicated) Entry: NVIDIA® T400 (4 GB GDDR6 dedicated) AMD Radeon™ RX 6400 (4 GB GDDR6 dedicated) NVIDIA RTX™ A400 (4 GB GDDR6 dedicated)
Audio	Realtek ALC3205-CG
Expansion slots	4 PCIe 5 x16; 2 PCIe 5 x4; 1 PCIe 4 x16; 3 PCIe 4 x4 (Rear bulkhead access can be achieved through all slots, but 2 PCIe 5 x4 and 2 PCIe 4 x4 are internal access only for M.2.)
Memory card device	1 SD card reader (optional)
Ports and connectors	Front: 4 USB Type-A 5Gbps signaling rate (1 charging); 1 headphone/microphone combo ; Rear: 1 audio-in/out; 6 USB Type-A 5Gbps signaling rate; 1 RJ-45 (1 GbE) ; Optional Ports: 2 Thunderbolt™ 4 with USB Type-C® 40Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4); Flex IO – choose one of the following options: 2 USB Type-A 5Gbps signaling rate, 1 USB Type-C® 10Gbps signaling rate, 1 serial, 1 HP 1 GbE LC fiber NIC, 1 HP 10 GBase-T NIC, 1 HP 1 GbE single-port NIC, 1 HP 2.5 GbE NIC; Front Premium Version: 1 USB Type-C® 20Gbps signaling rate, 2 USB Type-A 5Gbps signaling rate, 1 headphone/microphone combo

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Keyboard	HP 125 Wired Keyboard; HP USB 320K Keyboard; HP USB Business Slim Wired SmartCard CCID Keyboard[10]
Mouse	HP Wired Desktop 128 Laser Mouse; HP Wired 320M Mouse[10]
Communications	LAN: HP dual-port 10GBase-T NIC; Intel® X550-T2 dual-port 10GbE NIC; Allied Telesis AT-2911T/2-901 dual-port 1GbE NIC; Allied Telesis AT-2914SX/LC PCIe Fiber NIC; HP 1 GbE LC Fiber Flex IO port; HP 10 GBASE-T Flex IO port; HP Flex IO 1 GbE single-port NIC; HP 2.5 GbE Flex IO port; Integrated Realtek 1 GbE LAN; Intel® Ethernet Network Adapter I226-T1; WLAN: Intel® Wi-Fi 6E AX210 (2x2) and Bluetooth® 5.3 wireless card, non-vPro® with external antenna; MediaTek Wi-Fi 6 RZ616 (2x2) and Bluetooth® 5.3 wireless card with internal antenna;
Drive Bays	External: Four NVMe™ M.2 SSD; One 9.5 mm ODD; Internal: Two 3.5" HDD; Four PCIe® M.2 SSD
Software	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[18,19,20,31]
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[21,22,23,24,25,26,27,28]
Security Software Licenses	HP Wolf Pro Security Edition[29]
Management features	HP Driver Packs; HP System Software Manager (download); HP BIOS Configuration Utility (download); HP Smart Support
Power	1700 W internal power supply, up to 92% efficiency, active PFC; 1200 W internal power supply, up to 92% efficiency, active PFC; 775 W internal power supply, up to 92% efficiency, active PFC; 1350 W internal power supply, up to 92% efficiency, active PFC
Dimensions	6.65 x 18.3 x 17.5 in; 16.9 x 46.5 x 44.5 cm; (Standard desktop orientation.); 12.32 x 23.35 x 24.02 in; 31.3 x 59.3 x 61.0 cm (Package)
Weight	Starting at 29.1 lb; Starting at 13.2 kg; Starting at 40.23 lb; Starting at 18.3 kg (Package) ; (Exact weight depends on configuration.)
Ecolabels	EPEAT® registered configurations available; TCO Certified configurations available[11,12]
Energy star certified	ENERGY STAR® certified (configurations available)
Sustainable impact specifications	40% post-consumer recycled plastic; 25% ITE-derived closed loop plastic; Bulk packaging available; Plastic cushion inserts contain 80% recycled content; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; 10% post-consumer recycled plastic; Internal power supply 90% efficiency; Ocean-bound plastic in system and CPU fans[13,14,15,16,17]

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Messaging Footnotes

[1] 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. AMD's numbering is not a measurement of clock speed.
[2] Based on HP's internal analysis of cores in a single workstation CPU as of September 2023.
[3] Graphics are sold separately or as an optional feature.
[4] Optional, configurable feature.
[5] Optional, configurable features. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB is reserved for system recovery software.
[6] Unthrottled in Performance Mode.
[7] Graphics are sold separately or as an optional feature. Three NVIDIA RTX PROTM 6000 Blackwell Max-Q Workstation Edition GPUs are compatible with up to a 96C AMD RyzenTM ThreadripperTM PRO 9000 W-Series CPU, and requires a 1700W power supply in 220V/230V/240V outlets
[8] Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 EPEAT standard.
[9] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.
[10] 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 .
[11] Graphics are sold separately or as an optional feature. Three NVIDIA RTX™ 6000 Ada GPUs is compatible with up to a 16C AMD Ryzen™ Threadripper™ PRO 7000 WX-Series CPU and requires 1450W power supply in 220V/230V/240V outlets. AMD Radeon™ Pro W7900 GPU planned to be avaliable 1H 2024.
[12] Optional, configurable feature. 128GB DIMMs available early 2024.
[13] Optional, configurable features. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB (for Windows) is reserved for system recovery software.
[14] SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4. 20Gbps is available with USB 3.2 SuperSpeed Type-C®. Thunderbolt™ 4 not planned to be available until mid-2024. Actual throughput may vary.
[15] Thunderbolt™ 4, USB 3.2 SuperSpeed Type-C®, and two 10 GbE ports are optional, configurable features. Actual throughput may vary.
[16] Network access required. HP Anyware software and licensing are available through a 1- or 3-year subscription. Renewal is required after the subscription term. HP Anyware subscriptions are based on the number of concurrent PCoIP connections used (pay for the number of host connections, not the software) with a minimum order quantity of 5. For a limited time, an HP Anyware Professional subscription also includes access and support for ZCentral Remote Boost and ZCentral Connect and is available for purchase through an HP reseller or contact sales at hp.com/Anyware. ZCentral Remote Boost Sender requires Windows 10 and 11, RHEL/CentOS (7 or 8), or UBUNTU 18.04 or 20.04 LTS operating systems. macOS (10.14 or newer) operating system and ThinPro 7.2 are only supported on the receiver side. ZCentral Connect requires Windows (10 or 11) or Windows Server (2016 or 2019) operating system, Microsoft Active Directory, and Intel Active Management Technology for select features. For system requirements and to install HP Anyware and Anyware Manager, refer to the Admin Guides at: https://docs.teradici.com/find/product/hp-anyware .
[17] HP Remote System Controller is sold separately and HP Remote System Management requires internet access. Automation of tasks and viewing system information only available with select Z desktop workstations and Retail platforms, see datasheet for details. HP Integrated Remote System Controller not compatible with Z2 Mini platforms and not recommended for non-Z devices. HP service and support not available for non-Z devices. Full suite of functionality available with select Z desktop workstations and Retail platforms. See datasheet for details. HP Remote System Management access is included with the purchase of the hardware and is required for fleet management and viewing of consolidated reports from all devices.
[18] Enabled through a PCIe card. Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.
[19] Enabled through a flex I/O port. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.
[20] HP Smart Support requires HP TechPulse to be installed. For more information about how to enable or to download HP Smart Support, please visit http://www.hp.com/smart-support . HP Services Scan is provided thru Windows Update 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 and is not sold as a standalone service. HP follows stringent GDPR privacy regulations and is ISO27001, ISO27701, ISO27017 and SOC2 Type2 certified for Information Security. Internet access is required. For full system requirements or to disable this feature, please visit http://www.hpdaas.com/requirements .

Technical Specifications Footnotes

[1] Windows 11 Pro can be preinstalled. 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.[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] Note: Windows 7 and Windows 8 operating systems are not supported on this product. No Windows 7 or Windows 8 drivers will be provided on http://www.support.hp.com .
[3] Note: For detailed Linux® OS/hardware support information, see: http://www.hp.com/support/linux_hardware_matrix .
[5] For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB (for Windows) is reserved for system recovery software.
[6] 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. No support for DVD RAM.
[7] 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.
[8] Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.
[9] Wi-Fi 6 is an optional feature that must be configured at the time of purchase. Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.
[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] 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.
[13] This product is low halogen except for HP Z Turbo Quad Pro PCIe TLC SSD, power cords, cables, and peripherals. Service parts obtained after purchase may not be Low Halogen. CRU QX448 removable storage frames are not low halogen.
[14] Percentage of ocean-bound plastic contained in each component varies by product.
[15] Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.
[16] Outside box and corrugated cushions are 100% sustainably sourced and recyclable 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers.
[17] Fiber cushions made from 100% recycled wood fiber and organic materials.
[18] 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 .
[19] HP Support Assistant requires Windows and Internet access.
[20] HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html .
[21] HP Sure Click requires Windows 11 Pro or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.
[22] HP Sure Start Gen7 is available on select HP PCs and Workstations. See product specifications for availability.
[23] 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.
[24] 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.
[25] HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
[26] 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.
[27] HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.
[28] HP BIOSphere Gen6 features may vary depending on the platform and configurations.
[29] HP Wolf Pro Security Edition is available preloaded on select SKUs, and, depending on the HP product purchased, includes a license with a term length communicated to you at purchase and in your order confirmation email. The HP Wolf Pro Security Edition software is licensed under the license terms of the HP Wolf Security Software - End-User license Agreement (EULA) that can be found at: https://support.hp.com/us-en/document/ish_3875769-3873014-16 as that EULA is modified by the following: 7. Term. Unless otherwise terminated earlier pursuant to the terms contained in this EULA, the license for the HP Wolf Pro Security Edition is effective upon 4 months after the date the HP Product was shipped by HP and will continue for the term communicated to you at purchase and in your order confirmation email ("Initial Term"). At the end of the Initial Term you may either (a) purchase a renewal license for the HP Wolf Pro Security Edition from HP.com, HP Sales or an HP Channel Partner, or (b) continue using the standard versions of HP Sure Click and HP Sure Sense at no additional cost with no future software updates or HP Support. Notwithstanding the foregoing, the license shall expire no later than one year after the fixed term of the subject license ends.
[31] 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.
[40] The following components will not be available at product launch. Availability differs by component, with a target availability of early 2024. Components include: AMD Radeon Pro W7900.
[41] Available early 2024.

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August 2025