HP Z2 Small Form Factor G5 Workstation

HP's most powerful small form factor, reimagined.

Get high-end performance in a compact device. Completely redesigned to pack more graphics and processing into less space, you can easily take on complex 3D design projects. And with near endless configuration options, it's the ideal hardware when you need a custom solution.

*Product image may differ from actual product

HP recommends Windows 11 Pro for business

Performance that defies space constraints.

- For the first time ever, NVIDIA® Quadro RTX™ 3000[1] graphics and 10-core processor[2] are available in a small form factor. Re-engineered from the ground up, you get full, unthrottled performance for real-time rendering and faster visualizations.

Make it your own with our most customizable small form factor.

- Build a system matched exactly to your needs with over a million possible configurations. And with customizable I/O ports, you can support new and legacy technologies, dynamic displays and even a second LAN—without messy dongles or adapters.

We test it so you can trust it. 24/7.

- You need performance you can rely on. Our products endure over 360K hours of rigorous testing, MIL-STD testing[3] and software certifications. With an Intel® Xeon® processor,[2] ECC memory and an optional dust filter, you're ready for any environment.

HP's most secure workstation.

- Advanced security features come standard on every Z2 Small Form Factor. System safeguards like the industry's first self-healing BIOS help lock your device, data and identity down tight.

- Support your unique user needs with a choice of Windows 10 Pro 64 or Linux® operating systems.[4]

- Get great 3D performance with support for NVIDIA® and AMD professional graphics from Entry to Mid-range 3D.

- Get powerful performance on single and multi-threaded applications with the latest generation 10-core Intel® Xeon® and Intel® Core™ processors[2]

- Centralize your workstation fleet and power a remote workforce with HP ZCentral, a complete hardware and software solution.[5]

- Configure to the needs today and adapt to the future. Options include DP 1.4, VGA, HDMI, Dual USB Type-A, USB Type-C® with Alt-DP or 2nd Serial, and more.[6]

- Help keep your system clean while sitting on the factory floor or machining environment with the front-access dust filter.[7]

- Get multiple high-speed network connections including a second LAN option.[7]

- With optional self-encryption drives, you have confidence knowing that if your storage device falls into the wrong hands, your valuable IP has enhanced protection.[7]

- Stay informed with hardware status alerts via ZCentral Connect remote management software

HP Z2 Small Form Factor G5 Workstation Specifications Table

*Product image may differ from actual product

Available Operating Systems	Windows 11 Pro[1] Windows 11 Pro for Workstations[1] Windows 11 Home – HP recommends Windows 11 Pro for business[1] Windows 10 Pro[1] Windows 10 Pro for Workstations[1] Windows 10 Home – HP recommends Windows 11 Pro for business[1] Linux® Ready Ubuntu 20.04 LTS[3]
Processor family[3,7]	10th Generation Intel® Core™ i3 processor; 10th Generation Intel® Core™ i5 processor; 10th Generation Intel® Core™ i7 processor; 10th Generation Intel® Core™ i9 processor; 10th Generation Intel® Xeon® processor
Available Processors[3,5,6,7,29,40]	Intel® Core™ i3-10100 with Intel® UHD Graphics 630 (3.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 6 MB L3 cache, 4 cores); Intel® Core™ i3-10300 with Intel® UHD Graphics 630 (3.7 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores); Intel® Core™ i3-10320 with Intel® UHD Graphics 630 (3.8 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 8 MB L3 cache, 4 cores); Intel® Core™ i5-10400 with Intel® UHD Graphics 630 (2.9 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores); Intel® Core™ i5-10400F (2.9 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores); Intel® Core™ i5-10500 with Intel® UHD Graphics 630 (3.1 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores), supports Intel® vPro® Technology; Intel® Core™ i5-10600 with Intel® UHD Graphics 630 (3.3 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores), supports Intel® vPro® Technology; Intel® Core™ i5-10600K with Intel® UHD Graphics 630 (4.1 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores), supports Intel® vPro® Technology; Intel® Core™ i7-10700 with Intel® UHD Graphics 630 (2.9 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 16 MB L3 cache, 8 cores), supports Intel® vPro® Technology; Intel® Core™ i7-10700K with Intel® UHD Graphics 630 (3.8 GHz base frequency, up to 5.1 GHz with Intel® Turbo Boost Technology, 16 MB L3 cache, 8 cores), supports Intel® vPro® Technology; Intel® Core™ i9-10900 with Intel® UHD Graphics 630 (2.8 GHz base frequency, up to 5.2 GHz with Intel® Turbo Boost Technology, 20 MB L3 cache, 10 cores), supports Intel® vPro® Technology; Intel® Core™ i9-10900F (2.8 GHz base frequency, up to 5.2 GHz with Intel® Turbo Boost Technology, 20 MB L3 cache, 10 cores); Intel® Core™ i9-10900K with Intel® UHD Graphics 630 (3.7 GHz base frequency, up to 5.3 GHz with Intel® Turbo Boost Technology, 20 MB L3 cache, 10 cores), supports Intel® vPro® Technology; Intel® Xeon® W-1290P with Intel® UHD Graphics P630 (3.7 GHz base frequency, up to 5.3 GHz with Intel® Turbo Boost Technology, 20 MB L3 cache, 10 cores), supports Intel® vPro® Technology; Intel® Xeon® W-1270 with Intel® UHD Graphics P630 (3.4 GHz base frequency, up to 5.0 GHz with Intel® Turbo Boost Technology, 16 MB L3 cache, 8 cores), supports Intel® vPro® Technology; Intel® Xeon® W-1250P with Intel® UHD Graphics P630 (4.1 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores), supports Intel® vPro® Technology; Intel® Xeon® W-1270P with Intel® UHD Graphics P630 (3.8 GHz base frequency, up to 5.1 GHz with Intel® Turbo Boost Technology, 16 MB L3 cache, 8 cores), supports Intel® vPro® Technology; Intel® Xeon® W-1250 with Intel® UHD Graphics P630 (3.3 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores), supports Intel® vPro® Technology; Intel® Xeon® W-1290 with Intel® UHD Graphics P630 (3.2 GHz base frequency, up to 5.2 GHz with Intel® Turbo Boost Technology, 20 MB L3 cache, 10 cores), supports Intel® vPro® Technology; Intel® Core™ i9-10850K with Intel® UHD Graphics 630 (3.6 GHz base frequency, up to 5.2 GHz with Intel® Turbo Boost Technology, 20 MB L3 cache, 10 cores)
Chipset	Intel® W480
Form factor	Small form factor
Maximum memory	128 GB DDR4-3200 ECC SDRAM; 128 GB DDR4-3200 non-ECC SDRAM Transfer rates up to 2933MT/s.
Memory slots	4 DIMM
Internal storage	256 GB up to 2 TB SATA SSD[8] 256 GB up to 2 TB HP Z Turbo Drive PCIe® SSD M.2[8] up to 256 GB HP Z Turbo Drive PCIe® NVMe™ SED Opal 2 M.2 SSD[8] up to 512 GB HP Z Turbo Drive PCIe® NVMe™ SED Opal 2 M.2 SSD[8] 500 GB up to 2 TB 7200 rpm SATA HDD[8] 1 TB up to 8 TB 7200 rpm Enterprise SATA HDD[8] 256 GB up to 1 TB PCIe® NVMe™ SSD[30] up to 256 GB SATA SED Opal 2 SSD[8] up to 512 GB SATA SED Opal 2 SSD[8] up to 1 TB HP Z Turbo Drive PCIe® NVMe™ SED Opal 2 M.2 SSD[8] up to 2 TB HP Z Turbo Drive PCIe® NVMe™ SED Opal 2 M.2 SSD[8]
Optical drive	HP Slim DVD-ROM; HP Slim Blu-ray Writer; HP Slim DVD-Writer [9,18,19]
Available Graphics	Discrete: AMD Radeon™ Pro WX 3200 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated); NVIDIA® Quadro RTX™ 3000 (6 GB GDDR6 dedicated); NVIDIA® Quadro® T2000 (4 GB GDDR6 dedicated); NVIDIA® Quadro® T1000 (4 GB GDDR6 dedicated)[32]
Audio	Realtek ALC3205-VA2-CG, 2.0W internal mono speaker
Expansion slots	1 PCIe 3 x4 (x16 connector); 2 PCIe 3 x1 (x1 connector); 1 PCIe 3 x16 (x16 connector); 1 M.2 2230 PCIe 3 x1; 2 M.2 2280 PCIe 3 x4 (1 M.2 2230 slot for WLAN and 2 M.2 2280 slots for storage)
Ports and Connectors	Front: 1 headphone/microphone combo; 2 SuperSpeed USB Type-A 10Gbps signaling rate; 2 SuperSpeed USB Type-A 5Gbps signaling rate; 1 SuperSpeed USB Type-C® 10Gbps signaling rate ; Rear: 1 audio-out; 1 RJ-45; 2 USB 2.0; 2 DisplayPort™ 1.4; 2 SuperSpeed USB Type-A 5Gbps signaling rate; 2 SuperSpeed USB Type-A 10Gbps signaling rate ; Internal: 1 Media Card Reader ; Optional Ports: Flex IO rear port 1– choose one of the following options: 1 DisplayPort™ 1.4, 1 HDMI 2.0b, 1 VGA, 1 dual SuperSpeed USB Type-A 5Gbps signaling rate, 1 SuperSpeed USB Type-C® 10Gbps signaling rate (ALT DP, PD 15W), 1GbE LAN. Rear port 2 – 1 serial. Rear port 3 - choose one of the following options: 1 Thunderbolt™ 3, 1 serial and PS/2 ports combination
Input devices	HP PS/2 Business Slim Keyboard; HP USB Business Slim Keyboard; HP Wireless Business Slim Keyboard; USB Smart Card (CCID) keyboard; HP USB Premium keyboard; HP Premium Wireless keyboard; HP Wireless Business Slim Keyboard and mouse combo[9]; HP PS/2 Business Mouse; HP Wireless Business Mouse; HP USB Black Wired Mouse; HP Wireless Premium Mouse; HP USB Premium Wired Mouse[9];
Communications	LAN: HP 10 GbE SFP+ SR Transceiver; Integrated Intel® I219-LM PCIe® GbE; Intel® I350-T2 dual-port GbE NIC; Intel® I350-T4 4-port GbE NIC; Intel® X710-DA2 2-Port 10GbE SFP+ NIC; Intel® X550-T2 2-Port 10GbE NIC; Aquantia AQN-108 1-Port 5GbE NIC [4]; WLAN: Intel® Wi-Fi 6 AX201 (2x2) and Bluetooth® 5 combo ;
Drive Bays	One 3.5" HDD; One 2.5"; One 3.5"; Two M.2 NVME 2280 SSD
Software	HP PC Hardware Diagnostics UEFI; HP Performance Advisor; HP Support Assistant; HP PC Hardware Diagnostics Windows; ZCentral Remote Boost; HP Image Assistant; HP Manageability Integration Kit; [11,12,16,23]
Security management	HP Business PC Security Lock Kit; HP Keyed Cable Lock Kit; HP Solenoid Hood Lock and Sensor; HP UltraSlim Cable Lock Kit; HP Secure Erase; HP Sure Click; HP Sure Sense; HP Sure Start Gen6; HP Sure Run Gen3; HP Sure Recover Gen3; HP BIOSphere Gen6; HP Sure Admin; HP Client Security Manager Gen6;[15,20,21,22,24,25,26,27,28,34,35,36]
Power	260 W 92% efficient, wide-ranging, active PFC; 450 W 90% efficient, wide-ranging, active PFC
Dimensions	33.8 x 30.8 x 10 cm (Standard desktop orientation.)
Weight	Starting at 5.4 kg (Exact weight depends on configuration.)
Ecolabels	EPEAT® registered configurations available; TCO Certified configurations available[17]
Energy star certified (series fixed)	ENERGY STAR® certified
Sustainable impact specifications	Low halogen[33]
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] NVIDIA® Quadro RTX™ 3000 graphics are an add-on feature that must be configured at the time of purchase. Planned to be available in 1H 2021.
[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] Undergoes MIL-STD testing. MIL-STD testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Service.
[4] 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 .
[5] HP ZCentral Connect Software requires purchase of a perpetual floating license per simultaneous connection and purchase of 1 year ZCentral Connect Software Support Service and requires download at hp.com/ZCentral. Requires HP ZCentral Remote Boost Software which can be downloaded at hp.com/ZCentralRemoteBoost, a Windows 10, Windows Server 2016 or newer operating system, Microsoft Active Directory and Intel Active Management Technology for select features.
[6] Flexible I/O needs to be configured at time of purchase.
[7] Sold separately or as an optional feature.

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 .
[3] 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.
[4] Intel I350-T4 4-port GbE NIC is an AMO only.
[5] For full Intel® vPro™ functionality, Windows 10 Pro 64 bit, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or WLAN card and TPM 2.0 are required. Some functionality requires additional 3rd party software in order to run. See http://intel.com/vpro
[6] Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See http://www.intel.com/technology/turboboost for more information.
[7] 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.
[8] 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.
[9] Keyboard and Mouse are optional or add on features. The HP Antimicrobial Keyboard and HP Antimicrobial Mouse are only available in China.
[11] HP Support Assistant requires Windows and Internet access.
[12] HP ZCentral Remote Boost does not come preinstalled on Z Workstations but can be downloaded and run on all Z desktop and laptops without license purchase. With non-Z sender devices, purchase of perpetual individual license or perpetual floating license per simultaneously executing versions and purchase of ZCentral Remote Boost Software Support is required. RGS requires Windows, RHEL (7 or 8), UBUNTU 18.04 LTS, or HP ThinPro 7operating systems. MacOS (10.13 or newer) operating system is only supported on the receiver side. Requires network access. The software is available for download at hp.com/ZCentralRemoteBoost
[15] HP Client Security Manager Gen6 requires Windows and is available on the select HP PCs..
[16] 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
[17] Based on US EPEAT® registration according to IEEE 1680.1–2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.
[18] 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.
[19] 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.
[22] HP BIOSphere Gen6 features may vary depending on the platform and configurations.
[23] HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html
[24] HP Client Security Manager Gen6 requires Windows and is available on select HP Elite, Pro and Workstations.
[25] HP Sure Click requires Windows 11, Windows 10 Pro or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.
[26] HP Sure Start Gen 6 is available on select HP PCs and workstations. See product specifications for availability.
[27] HP Sure Run Gen3 is available on select Windows 11, Windows 10 based HP Pro, Elite and Workstation PCs with select Intel® or AMD processors
[28] HP Sure Recover Gen3 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.
[29] Configurations with the i9-10900F and i5-10400F CPUs, Discrete graphics card must be configured when configuring CPUs without Intel UHD graphics.
[30] 256 GB up to 1TB PCIe NVMe SSD not available until November 2020 and requires factory configuration.
[32] NVIDIA® Quadro® RTX 3000 available in Q1, 2021.
[33] External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
[34] Secure Erase - For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane
[35] HP Sure Sense requires Windows 11, Windows 10 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.
[36] HP Sure Admin requires Windows 11, Windows 10, 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.
[40] Configurations with the Core i5-10600K, i7-10700K, i9-10900K, Xeon W-1250P, W-1270P and W-1290P offered on the Performance model (125W motherboard) only.

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