HP Z1 G8 Tower Desktop PC

Step up to the most affordable pro-certified Z desktop.

Pro-grade performance is now within reach with a desktop built for designing, editing and even gaming. From 2D and 3D CAD to entry VR content creation, gain speed and efficiency across your workflows. Go beyond a commercial PC with a desktop certified for select professional software applications.

*Product image may differ from actual product

HP recommends Windows 10 Pro for business

Performance options for what you do.

- Easily multitask with an Intel® Core™ vPro®[1] processor paired with the ideal graphics for your work. Designing in CAD? Accelerate 3D workflows with NVIDIA® Quadro® or AMD Radeon™ RX GPUs. Creating in VR? Go for NVIDIA® GeForce®.[2]

Certified to fly with professional apps

- Work confidently knowing your desktop is tested and certified for select professional apps. We've worked closely with software providers on apps like AutoCAD®, SOLIDWORKS® and Revit® so you get seamless, reliable performance across your workflow.[3]

Industry-leading security

- Hardened security features come standard on every Z1 Tower, for an always-on, always-acting, resilient defense. From the BIOS to the browser, above and below the OS, these constantly evolving solutions help protect your PC from threats.

Access the power of your Z1 from anywhere.

- Tap into the power of your Z1 Tower from anywhere and on almost any device with HP ZCentral Remote Boost.[4] Get fast responsiveness and exceptional image quality on demanding projects. Seamlessly collaborate with dispersed teams, even on 3D models.

- Be productive in any situation. Windows 10 Pro[4] and powerful security, collaboration and connectivity features from HP help you power through your day.

- Get powerful performance on single-threaded applications with the latest generation Intel® Core™ vPro®[1] processors.

- Create 2D designs and 3D models with optional NVIDIA® Quadro® P2200 or AMD Radeon™ RX 550X graphics.[6] Creating in VR? Amp up your experience with optional NVIDIA® GeForce RTX™ 3070 graphics.[12]

- Get fast network connectivity with 2.5Gb Ethernet interface.

- Experience fast performance when working on complex design tasks with up to 128GB DDR4 memory at in an increased memory speed of up to 3200MHz.[7]

- Store massive amounts of data with up to 10TB[8] of storage, 3 hard drive bays and 2 M.2 SSD slots. With increased storage bandwidth enabled by PCIe Gen 4 and double the external storage speed, you can download and access large files quickly.

- We know you need performance you can rely on. That's why our products endure rigorous military standard testing[9] and software certifications.

- Configure a third configurable rear I/O port for customizable display connections with your choice of VGA, DisplayPort™, HDMI or USB-Type C® with DisplayPort™.

- Built with the environment in mind, this product contains recycled plastics, sustainably sourced packaging,[10] ultra-efficient power consumption, and uses materials that meet GreenScreen® for Safer Chemicals' methodology standards.[11]

HP Z1 G8 Tower Desktop PC Specifications Table

*Product image may differ from actual product

Available Operating Systems	Windows 10 Pro 64 – HP recommends Windows 10 Pro for business[1] Windows 10 Pro 64 High End Windows 10 Home 64[1] FreeDOS Windows 10 Home 64 Advanced Windows 10 Pro 64 (National Academic only)[1,2]
Processor family	11th Generation Intel® Core™ i7 processor; 11th Generation Intel® Core™ i5 processor; 11th Generation Intel® Core™ i9 processor
Available Processors[3,4,5,6]	Intel® Core™ i9-11900 with Intel® UHD Graphics 750 (2.5 GHz base frequency, up to 5.2 GHz with Intel® Turbo Boost Technology, 16 MB L3 cache, 8 cores), supports Intel® vPro® Technology; Intel® Core™ i7-11700 with Intel® UHD Graphics 750 (2.5 GHz base frequency, up to 4.9 GHz with Intel® Turbo Boost Technology, 16 MB L3 cache, 8 cores), supports Intel® vPro® Technology; Intel® Core™ i5-11600 with Intel® UHD Graphics 750 (2.8 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™ i5-11500 with Intel® UHD Graphics 750 (2.7 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores), supports Intel® vPro® Technology; Intel® Core™ i5-11400 with Intel® UHD Graphics 730 (2.6 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores)
Chipset	Intel® Q570
Form factor	Tower
Maximum memory	128 GB DDR4-3200 ECC SDRAM [7,8] Transfer rates up to 3200 MT/s.
Memory slots	4 DIMM
Internal storage	500 GB up to 2 TB 7200 rpm SATA[9] up to 2 TB 5400 rpm SATA[9] up to 500 GB SATA SED Opal 2 HDD[9] up to 500 GB 7200 rpm SATA FIPS SED[9] 256 GB up to 512 GB PCIe® NVMe™ M.2 SSD[9] 128 GB up to 2 TB PCIe® NVMe™ TLC M.2 SSD[9] 256 GB up to 512 GB PCIe® NVMe™ SED Opal 2 TLC M.2 SSD[9] 256 GB up to 512 GB Intel® Optane™ Memory H10 with Solid State Storage[9,10]
Optical drive	HP 9.5 mm Slim DVD-Writer; HP 9.5 mm Slim DVD-ROM [11]
Available Graphics	Integrated: Intel® UHD Graphics 730; Intel® UHD Graphics 750 Discrete: NVIDIA® GeForce RTX™ 3060 (12 GB GDDR6 dedicated); NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); AMD Radeon™ R7 430 Graphics (2 GB GDDR5 dedicated); NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P2200 (5 GB GDDR5X dedicated); AMD Radeon™ RX 550X Graphics (4 GB GDDR5 dedicated); NVIDIA® GeForce RTX™ 3070 (8 GB GDDR6 dedicated)[16,17,39,40]
Audio	Realtek ALC3205 codec, universal audio jack with CTIA and OMTP headset support
Expansion slots	1 M.2 2230; 2 PCIe 3 x1; 1 PCIe 3 x16 (wired as x4); 2 M.2 2280; 1 PCIe 4 x16 (1 M.2 2230 slot for WLAN and 2 M.2 2280 slots for storage)
Memory card device	5-in-1 SD card reader (optional)
Ports and Connectors	Front: 2 SuperSpeed USB Type-A 10Gbps signaling rate; 1 universal audio jack; 2 SuperSpeed Type-A USB 5Gbps signaling rate (1 charging); 1 SuperSpeed USB Type-C® 20Gbps signaling rate (1 charging) Rear: 1 audio-out; 1 power connector; 1 RJ-45; 2 DisplayPort 1.4; 2 SuperSpeed USB Type-A 10Gbps signaling rate; 1 SuperSpeed USB Type-A 5Gbps signaling rate; 3 USB Type-A 480Mbps signaling rate Optional Ports: Flex IO – choose one of the following options: 1 DisplayPort™ 1.4, 1 HDMI 2.0, 1 VGA, 2 SuperSpeed USB Type-A 5Gbps signaling rate, 1 SuperSpeed USB Type-C® 10Gbps signaling rate (15W output, DisplayPort™ 1.4), 1 Thunderbolt™ 3 with SuperSpeed USB4 Type-C® 40Gbps signaling rate (cabled to PCIe® AIC), 1 serial and PS/2 ports combination, 1 parallel port[20,37,38]
Input devices	HP USB Premium keyboard; HP Premium Wireless keyboard; HP USB wired keyboard; HP Wireless Business Slim Keyboard and mouse combo; HP Wired Desktop 320K keyboard; HP PS/2 Business Slim Keyboard; HP USB Healthcare Edition Keyboard and mouse combo; HP Wireless Premium Keyboard and mouse combo[36]; HP USB Premium Mouse; HP Wireless Premium Mouse; HP Wired Desktop 320M mouse; HP USB Hardened optical wired mouse; HP PS/2 Mouse; HP USB wired optical mouse; HP USB wired premium mouse; HP USB Fingerprint Mouse[19];
Communications	LAN: Integrated Intel® I219LM GbE LOM; Intel® I225-LM 2.5 GbE LOM, non-vPro® ; WLAN: Intel® Wi-Fi 6 AX201 (2x2) and Bluetooth® 5 combo, vPro®; Intel® Wi-Fi 6 AX201 (2x2) and Bluetooth® 5 combo, non-vPro®; Realtek Wi-Fi 6 RTL8852AE 802.11a/b/g/n/ax (2x2) and Bluetooth® 5.2 combo [12,13,14,15,32];
Drive Bays	One slim ODD; One 5.25" ODD; One 2.5" HDD; Two 3.5" HDD
Software	HP Jumpstart; HP Noise Cancellation Software; HP Support Assistant; Buy Office (sold separately); HP Privacy Settings; HP Desktop Support Utilities; HP Setup Integrated OOBE[21]
Security management	HP Power On Authentication; Power-on password (via BIOS); SATA port disablement (via BIOS); Setup password (via BIOS); Support for chassis padlocks and cable lock devices; USB enable/disable (via BIOS); Serial enable/disable (via BIOS); HP Sure Click; Windows Defender; HP Sure Sense; Trusted Platform Module TPM 2.0 Embedded Security Chip shipped with Windows 10. (Common Criteria EAL4+ Certified); HP Client Security Manager Gen7; HP Sure Start Gen7; HP Sure Run Gen4; HP Sure Recover Gen4; HP Tamper Lock[25,26,27,28,29,30,31]
Management features	HP Client Catalog (download); HP Cloud Recovery; HP Driver Packs; HP Management Integration Kit for Microsoft System Center Configuration Management Gen4; HP System Software Manager (download); HP BIOS Configuration Utility (download); HP Image Assistant (download); Ivanti Management Suite (download); HP Client Management Script Library (download)[18,22,23,24]
Power	260 W 92% efficient, wide-ranging, active PFC; 550 W 92% efficient, wide-ranging, active PFC
Dimensions	37 x 30.8 x 16.8 cm
Weight	5.95 kg (Exact weight depends on configuration.)
Energy efficiency compliance	ENERGY STAR® certified; EPEAT® Gold registered in US[34]
Sustainable impact specifications	Ocean-bound plastic in speaker enclosure; 45% post-consumer recycled plastic; 5% ITE-derived closed loop plastic; Bulk packaging available; 80 Plus® Platinum power supplies available; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable[35]

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Accessories and services (not included)

HP 5-year Next Business Day Onsite Workstation Only Hardware Support

HP Care Pack

Receive 5 years of next business day onsite repair from an HP-qualified technician for your computing device, if the issue cannot be solved remotely. For more information on Care Pack services, please visit www.hp.com/go/cpc.
Product number: U1G39E

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Messaging Footnotes

[1] vPro® is available on Intel® Core™ i5-11500 and above processors.
[2] NVIDIA® GeForce® graphics are an add-on feature that must be configured at the time of purchase.
[3] Third party software sold separately.
[4] HP ZCentral Remote Boost does not come preinstalled on Z Workstations but can be downloaded and run on all Z desktop and laptops without an additional license purchase. When you purchase a Z device, you get an embedded license. With non-Z sender devices, it is a perpetual or floating license. ZCentral Remote Boost requires a Windows (10 or 7 SP2), RHEL (6, 7 or 8), UBUNTU 18.04 LTS, or HP ThinPro operating system. 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.
[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 .
[6] Sold separately or as an optional feature.
[7] Memory speed increase is compared gen/gen.
[8] 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.
[9] 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.
[10] 100% outer box packaging made from sustainably sourced certified and recycled fibers. Fiber cushions made from 100% recycled wood fiber and organic material. Any plastic cushions are made from >90% recycled plastic.
[11] Based on IEEE 1680.1-2018 standards.
[12] NVIDIA® GeForce® graphics are an add-on feature that must be configured at the time of purchase.

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 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] Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see https://aka.ms/ProEducation for Windows 10 Pro Education feature information.
[3] 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 configuration measurement of higher performance.
[4] Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.
[5] Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
[6] Some functionality of vPro 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. Compatibility with future "virtual appliances" is yet to be determined.
[7] For systems configured with more than 3 GB of memory and a 32-bit operating system, all memory may not be available due to system resource requirements. Addressing memory above 4 GB requires a 64-bit operating system. Memory modules support data transfer rates up to 2933 MT/s or 3200 MT/s as depending on processor config; with 1 DIMM per channel. Additional DIMM loading on any channel may impact maximum memory speed. Actual data rate is determined by the system's configured ; See processor specifications for supported memory data rate.
[8] All memory slots are customer accessible / upgradeable.
[9] For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB (for Windows 10) of system disk is reserved for the system recovery software.
[10] Intel® Optane™ memory is sold separately. Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system. Available for HP commercial desktops and notebooks and for select HP workstations (HP Z240 Tower/SFF, Z2 Mini, ZBook Studio, 15 and 17 G5) and requires a SATA HDD, 7th Gen or higher Intel® Core™ processor or Intel® Xeon® processor E3-1200 V6 product family or higher, BIOS version with Intel® Optane™ supported, Windows 10 version 1703 or higher, M.2 type 2280-S1-B-M connector on a PCH Remapped PCIe Controller and Lanes in a x2 or x4 configuration with B-M keys that meet NVMe™ Spec 1.1, and an Intel® Rapid Storage Technology (Intel® RST) 15.5 driver.
[11] HD-DVD disks cannot be played on this drive. No support for DVD-RAM. Actual speeds may vary. Don't copy copyright-protected materials. 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.
[12] Intel® I225-LM 2.5 GbE LOM: Sold separately or as an optional feature.
[13] Wireless access point and internet service required and sold separately. Availability of public wireless access points limited.
[14] Wi-Fi 6 is backwards compatible with prior 802.11 specs. The specifications for the 802.11ax are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the PC to communicate with 802.11ax WLAN devices. Wi-Fi 6 requires a wireless router, sold separately, that supports 802.11ax (Wi-Fi 6). Only available in countries where 802.11ax is supported.
[15] For full Intel® vPro® functionality, Windows, a vPro supported processor, vPro enabled Q570 chipset or higher and vPro enabled WLAN card are required.
[16] The TWR can support a single discrete graphics card up to 300W with a 550W Power Supply.
[17] NVIDIA® GeForce® RTX 3070 and AMD® Radeon™ RX 550X 4GB Graphics Card require 550W chassis.
[18] HP Cloud Recovery is available for HP Elite and Pro desktops and laptops PCs with Intel® or AMD processors and requires an open, wired network connection. Note: You must back up important files, data, photos, videos, etc. before use to avoid loss of data. Detail please refer to: https://support.hp.com/us-en/document/c05115630 .
[19] Antimicrobial USB Mouse, HP USB Hardened Optical Wired Mouse : are not available in all regions.
[20] Thunderbolt™ 3.0 will be available in Q3, 2021.
[21] HP Support Assistant: Requires Windows and Internet access.
[22] HP Driver Packs: Not preinstalled, however available for download at http://www.hp.com/go/clientmanagement
[23] HP Manageability Integration Kit can be downloaded from http://www.hp.com/go/clientmanagement .
[24] Ivanti Management Suite subscription required.
[25] HP Client Security Manager Gen6 requires Windows and is available on select HP Pro and Elite PCs.
[26] Windows Defender Opt in Windows 10 and internet connection required for updates.
[27] HP Sure Start Gen7 is available on select HP PCs and workstations. See product specifications for availability.
[28] HP Sure Sense requires Windows 10.
[29] HP Sure Run Gen4 is available on select Windows 10 based HP Pro, Elite and Workstation PCs with select Intel® or AMD processors.
[30] HP Sure Recover Gen4 is available on select HP PCs and requires an open network connection. Not available on platforms with multiple internal storage drives. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.
[31] HP Sure Click is available on most HP PCs 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.
[32] Intel® I225 will be available in Q3, 2021.
[34] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.
[35] External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
[36] HP USB Business Slim Antimicrobial Keyboard is not available in all regions.
[37] Of the following, only one option can be configured at a time: DisplayPort™ 1.4; HDMI 2.0b; Dual Type A SuperSpeed USB 5Gbps signaling rate port; Serial; Thunderbolt™ 3.0; USB-C® SuperSpeed USB 10Gbps signaling rate port (USB-C® option has alt mode DisplayPort™ 1.4 and 15W output); VGA
[38] Thunderbolt™ 3.0 , Serial/PS/2 combo ,Parallel port occupies a PCIe slot.
[39] Not all Graphic Cards may be available in all countries.
[40] A second 3.5" HDD can't be used with the GeForce RTX™ 3060 installed.

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