



HP Z1 Entry Tower G5

Step up to our most affordable Z desktop

World-class performance is now within reach with a desktop certified for pro software. From entry 2D/3D CAD design to VR content creation, you gain speed and efficiency in your professional workflows. Go beyond a business PC. Upgrade to a Z.



HP recommends Windows 10 Pro.

Pick the perfect components for the work you do

- Designing with pro software like Autodesk and SolidWorks? Choose a certified NVIDIA Quadro® graphics card¹ for optimized performance. Or creating for virtual reality? Opt for a NVIDIA GeForce® GTX graphics card¹ and be VR-ready from the start.

Optimize your pro software performance

- Work confidently knowing your desktop is tested and certified for your most critical applications. We've worked closely with leading software providers so you can get seamless and reliable performance at every stage of your workflow.

Safeguard your data. Protect your privacy.

- Advanced security features come standard on every Z1 Entry Tower. System safeguards like HP Client Security Manager Gen4² and HP Sure Start Gen4³ - the industry's first self-healing BIOS - mean your device is locked down tight, so your data and identity are too.
- Be productive in any situation. Windows 10 Pro and powerful security, collaboration, and connectivity features from HP help you power through your day.⁴
- Create complex 2D designs and 3D models with optional certified NVIDIA Quadro® P400 and P620 graphics powered by 2 GB of ultra-fast GPU memory.
- Amp up your VR experience with fast, smooth performance.
- 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™.
- Keep your critical applications and processes running even if malware tries to shut them down with self-healing protection with HP Sure Run.⁶
- HP Sure Recover lets you quickly and securely restore your PC to the latest image using only a network connection.⁷
- The HP Manageability Integration Kit Gen2 helps speed up image creation and management of hardware, BIOS, and security through Microsoft System Center Configuration Manager.⁸

HP Z1 Entry Tower G5 Specifications Table



Available Operating Systems	Windows 10 Pro for Workstations 64 - HP recommends Windows 10 Pro ¹ Windows 10 Pro 64 (National Academic only) ^{1,2} Windows 10 Home 64 ¹ Windows 10 Home Single Language 64 ¹ FreeDOS 2.0
Processor family ^{17,21}	Intel® Pentium® processor (G5400, G5500, G5600 are Windows 10 only); AMD Ryzen™ 7 PRO processor; 9th Generation Intel® Core™ i9 processor; 9th Generation Intel® Core™ i7 processor; 9th Generation Intel® Core™ i5 processor; 9th Generation Intel® Core™ i3 processor; 8th Generation Intel® Core™ i7 processor; 8th Generation Intel® Core™ i5 processor; 8th Generation Intel® Core™ i3 processor
Available Processors ^{3,10,17,21,38}	Intel® Pentium® Gold G5620 with Intel® UHD Graphics 630 (4.0 GHz, 4 MB cache, 2 cores) Intel® Pentium® Gold G5600 with Intel® UHD Graphics 630 (3.9 GHz, 4 MB cache, 2 cores) Intel® Pentium® Gold G5500 with Intel® UHD Graphics 630 (3.8 GHz, 4 MB cache, 2 cores) Intel® Pentium® Gold G5420 with Intel® UHD Graphics 610 (3.8 GHz base frequency, 4 MB cache, 2 cores) Intel® Pentium® Gold G5400 with Intel® UHD Graphics 610 (3.7 GHz, 4 MB cache, 2 cores) Intel® Core™ i9-9900K with Intel® UHD Graphics 630 (3.6 GHz base frequency, up to 5.0 GHz with Intel® Turbo Boost Technology, 16 MB cache, 8 cores) Intel® Core™ i9-9900 with Intel® UHD Graphics 630 (3.1 GHz base frequency, up to 5.0 GHz with Intel® Turbo Boost Technology, 16 MB cache, 8 cores) Intel® Core™ i7-9700K with Intel® UHD Graphics 630 (3.6 GHz base frequency, up to 4.9 GHz with Intel® Turbo Boost Technology, 12 MB cache, 8 cores) Intel® Core™ i7-9700 with Intel® UHD Graphics 630 (3.0 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB cache, 8 cores) Intel® Core™ i7 8700K with Intel® UHD Graphics 630 (3.7 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores) Intel® Core™ i7 8700 with Intel® UHD Graphics 630 (3.2 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores) Intel® Core™ i5-9600K with Intel® UHD Graphics 630 (3.7 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5-9600 with Intel® UHD Graphics 630 (3.1 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5-9500 with Intel® UHD Graphics 630 (3.0 GHz base frequency, up to 4.4 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5 8600K with Intel® UHD Graphics 630 (3.6 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5 8600 with Intel® UHD Graphics 630 (3.1 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i5 8500 with Intel® UHD Graphics 630 (3 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores) Intel® Core™ i3-9300 with Intel® UHD Graphics 630 (3.7 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Core™ i3 8300 with Intel® UHD Graphics 630 (3.7 GHz, 8 MB cache, 4 cores) Intel® Core™ i3 8100 with Intel® UHD Graphics 630 (3.6 GHz, 6 MB cache, 4 cores)
Chipset	Intel® Q370
Form factor	Tower
Maximum memory	64 GB DDR4-2666 SDRAM ^{4,13} Transfer rates up to 2666 MT/s.
Memory slots	4 DIMM
Internal storage	500 GB up to 2 TB 7200 rpm SATA ⁵ 2 TB 5400 rpm SATA ⁵ 500 GB SATA SED Opal 2 HDD ⁵ 500 GB 7200 rpm SATA FIPS SED ⁵ 500 GB up to 2 TB 5400 rpm SATA SSHD ⁵ 256 GB up to 512 GB SATA SED Opal 2 TLC SSD ⁵ 256 GB up to 512 GB SATA FIPS SSD ⁵ 128 GB up to 512 GB PCIe® NVMe™ M.2 SSD ⁵ 128 GB up to 1 TB PCIe® NVMe™ TLC M.2 SSD ⁵ 256 GB up to 512 GB PCIe® NVMe™ SED Opal 2 TLC M.2 SSD ⁵
Additional storage	5-in-1 SD card reader
Storage acceleration ³⁸	16 GB PCIe® NVMe™ Intel® Optane™ Memory for storage acceleration
Optical drive	HP 9.5 mm Slim DVD-Writer
Available Graphics	Integrated: Intel® UHD Graphics 630; Intel® UHD Graphics 610 Discrete: NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated); NVIDIA® GeForce® GTX 1080 (8 GB GDDR5 dedicated); AMD Radeon™ RX 580 Graphics (4 GB GDDR5 dedicated); AMD Radeon™ R7 430 Graphics (2 GB GDDR5 dedicated); NVIDIA® GeForce® RTX 2080 (8 GB GDDR5 dedicated); AMD Radeon™ RX 550X Graphics (4 GB GDDR5 dedicated); NVIDIA® GeForce® RTX 2070 (8 GB GDDR6 dedicated)
Audio	Conexant CX20632 codec, universal audio jack, headset and headphone front ports (3.5 mm), multi-streaming capable
Expansion slots	1 M.2 2230; 1 PCIe 3 x16; 2 PCIe 3 x1; 1 PCIe 3 x16 (wired as x4); 2 M.2 2230/2280 (1 M.2 slot for WLAN and 1 M.2 2230/2280 slot for storage.)
Ports and Connectors	Rear: 1 audio-in; 1 audio-out; 1 power connector; 1 RJ-45; 1 serial; 2 DisplayPort™ 1.2; 2 USB 2.0; 2 USB 3.1 Gen 1; 2 USB 3.1 Gen 2 ^{18,19} Front: 1 headphone; 1 headset connector; 1 USB 2.0; 2 USB 3.1 Gen 2; 1 USB 2.0 (fast charging); 1 USB 3.1 Type-C™ (charging) 1 DisplayPort™ 1.2; 1 HDMI 2.0; 1 serial; 1 VGA; 1 USB 3.1 Type-C™ Gen 1 (DisplayPort™) ³⁷
Input devices	HP PS/2 Business Slim Keyboard; HP USB Business Slim Keyboard; HP USB Keyboard; HP Wireless Business Slim Keyboard and Mouse Combo; HP PS/2 Keyboard; HP Conferencing Keyboard; HP USB and PS/2 Washable Keyboard; HP USB Smart Card (CCID) Keyboard; HP Wireless Collaboration Keyboard; HP PS/2 Mouse; HP USB 1000 dpi Laser Mouse; HP USB Hardened Mouse; HP USB Optical Mouse; HP USB Premium Mouse; HP USB and PS/2 Washable Mouse; HP USB Antimicrobial Mouse ⁸ ;
Communications	LAN: Intel® I210-T1 PCIe® GbE Integrated Intel® I219LM GbE LOM ¹⁶ ; WLAN: Realtek RTL8822BE-CG 802.11a/b/g/n/ac (2x2) with Bluetooth® 4.1 M.2 PCIe® Intel® Dual Band Wireless-AC 9560 802.11ac (2x2) and Bluetooth® 5 M.2, non-vPro™ Intel® Dual Band Wireless-AC 9560 802.11ac (2x2) and Bluetooth® 5 M.2, vPro™ Realtek RTL8821CE-CG 802.11a/b/g/n/ac (1x1) with Bluetooth® 4.2 M.2 PCIe® ^{7,39} ;
Drive Bays	1 slim optical drive bay; One 5.25" ODD; One 2.5" HDD; Two 3.5" HDD ²⁰
Available Software ^{9,22,23,24,25,26}	Absolute Persistence module; HP ePrint Driver + JetAdvantage; HP Hotkey Support; HP Jumpstart; HP Noise Cancellation Software; HP PhoneWise; HP Support Assistant; HP Velocity; Native Miracast Support; HP Wireless Wakeup; Buy Office (sold separately); HP Sure Recover
Security management ^{11,29,30,31,32,33,34,35,36}	Removable media write/boot control; DriveLock; HP BIOSphere; HP Password Manager; HP Power On Authentication; Intel® Identity Protection Technology (Intel® IPT); Power-on password (via BIOS); RAID configurations; SATA port disablement (via BIOS); Setup password (via BIOS); Support for chassis padlocks and cable lock devices; USB enable/disable (via BIOS); Solenoid lock and hood sensor; HP Client Security Suite Gen 4; HP Sure Start Gen 4; HP Sure Run; Parallel enable/disable (via BIOS); Serial enable/disable (via BIOS); Trusted Platform Module TPM 2.0 Embedded Security Chip shipped with Windows 10 (Common Criteria EAL4+ Certified)(FIPS 140-2 Level 2 Certified)
Power	250 W internal power supply, up to 92% efficiency, active PFC; 500 W internal power adapter, up to 92% efficiency, active PFC
Dimensions	6.1 x 14.6 x 14.4 in
Weight	21.73 lb
Energy efficiency compliance ¹²	ENERGY STAR® certified and EPEAT® 2019 registered where applicable. EPEAT® registration varies by country. See www.epeat.net for registration status by country.
Environmental specifications ¹⁵	Low halogen

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Accessories and services (not included)

HP Z24nf G2 23.8-inch Display



Be a productive powerhouse with the sleek HP Z24nf G2 23.8-inch Display. This virtually seamless Full HD display is factory-tested for reliability and longevity with integrated color calibration, uninterrupted multi-screen tiling, and expansive device connections.
Product number: 1JS07A8

HP PCIe NVMe TLC 512GB SSD PCIe Drive



Reduce boot up, calculation, and graphics response times and revolutionize how your HP Business Desktop handles large files with the HP PCIe NVMe TLC 512GB SSD PCIe Drive, a remarkably affordable and innovative PCIe-based NVMe memory SSD storage solution.
Product number: Z4L70AA

HP 16GB DDR4-2666 DIMM



Boost the capabilities of your HP Business Desktop PC and improve system performance and application responsiveness with low-power, high-speed DDR4 memory from HP.
Product number: 3TK83AA

HP Thunderbolt 3 PCIe 2-port I/O Card



Enable ultra-fast backup, editing, and file sharing, and significantly reduce the time to complete key tasks on select HP Z Workstations with the HP Thunderbolt 3 PCIe 2-port I/O Card driven by Thunderbolt™ 3 technology
Product number: 3UU05AA

Intel Ethernet I350-T2 2-Port 1Gb NIC



The I350-T2 dual port, copper, Gigabit PCIe NIC offers two ports of 10/100/1000 Mbps Ethernet transfer rate performance in a single PCIe x4 slot.
Product number: V4A91AA

HP 4 year Next Business Day Onsite Hardware Support w/Defective Media Retention for Workstations



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day1 Onsite Service with Defective Media Retention, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.
Product number: U1G56E (for 4 year platforms), U1G57E (for 5 year platforms)

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Messaging Footnotes

¹ Sold separately or as an add-on feature.

² HP Client Security Manager Gen4 requires Windows and Intel® or AMD 8th generation processors.

³ HP Sure Start Gen4 is available on HP Elite and HP Workstation products equipped with 8th generation Intel® or AMD processors.

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 Sure Run is available on HP Elite and HP Workstation products equipped with 8th generation Intel® or AMD processors.

⁷ HP Sure Recover is available on HP Workstations with 8th generation Intel® or AMD processors and requires an open, wired network connection. Not available on platforms with multiple internal storage drives, Intel® Optane™. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.

⁸ HP Manageability Integration Kit Gen2 can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.

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 measurement of higher performance.

⁴ 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 2133 MT/s; actual data rate is determined by the system's configured processor. See processor specifications for supported memory data rate. All memory slots are customer accessible / upgradeable.

⁵ For hard drives and solid state drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8.1/10) of system disk is reserved for the system recovery software.

⁶ (1) Configurable video port: Choice of DisplayPort™ 1.2, HDMI™ 2.0, or VGA, Type-C Card with Display Output, Type-C Card with Display Output and Power Delivery.

⁷ Wireless access point and internet service required. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.

⁸ Antimicrobial USB Mouse and HP USB Hardened Mouse, HP PS/2 Mouse, HP USB and PS/2 Washable Mouse: are not available in all regions.

⁹ Miracast is a wireless technology your PC can use to project your screen to TVs, projectors, and streaming.

¹⁰ Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See <http://www.intel.com/technology/turboboost> for more information.

¹¹ HP BIOSphere Gen4: Requires Intel® or AMD 8th Gen processors. Features may vary depending on the platform and configurations.

¹² Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.

¹³ All memory slots are customer accessible / upgradeable.

¹⁵ External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen

¹⁶ Intel® 1210-11 PCIe® GbE: Sold separately or as an optional feature.

¹⁷ Your product does not support Windows 8 or Windows 7. In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel® and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on <http://www.support.hp.com>

¹⁸ (2) USB 3.1 Gen 1 (5 Gbit/s): allows for wake from S4/S5 with keyboard/mouse when connected and enabled in BIOS.

¹⁹ The TWR can support a single graphics card up to 75W. When configured with dual graphics cards support is limited to 35W for each.

²⁰ 4 SATA.

²¹ Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.

²² Absolute Persistence Module: Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the U.S. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details visit: <http://www.absolute.com/company/legal/agreements/computrace-agreement>. Data Delete is an optional service provided by Absolute Software. If utilized, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a Pre-Authorization Agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.

²³ HP ePrint Driver: Requires an Internet connection to HP web-enabled printer and HP ePrint account registration (for a list of eligible printers, supported documents and image types and other HP ePrint details, see www.hp.com/go/eprintcenter). Print times and connection speeds may vary.

²⁴ HP Support Assistant: Requires Windows and Internet access.

²⁶ HP Sure Recover is available on HP Workstations with 8th generation Intel® or AMD processors and requires an open, wired network connection. Not available on platforms with multiple internal storage drives, Intel® Optane™. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.

²⁹ HP Client Security Suite Gen 4: Requires Windows and Intel® or AMD 8th generation processors.

³⁰ HP Password Manager: Requires Internet Explorer or Chrome or FireFox. Some websites and applications may not be supported. User may need to enable or allow the add-on / extension in the internet browser.

³¹ Microsoft Defender: Opt in and internet connection required for updates.

³² HP Sure Start Gen4: Is available on HP Elite and HP Workstation products equipped with Intel® 8th generation processors.

³³ Firmware TPM: Is version 2.0. Hardware TPM is v1.2, which is a subset of the TPM 2.0 specification version v0.89 as implemented by Intel Platform Trust Technology (PTT).

³⁴ RAID configuration: Is optional and does require a second hard drive.

³⁵ HP Sure Run: Is available on HP Elite and HP Workstation products equipped with 8th generation Intel® or AMD processors.

³⁶ Intel® Identity Protection Technology (Intel® IPT): Models configured with Intel® Core™ processors have the ability to utilize advanced security protection for online transactions. Intel® Identity Protection Technology (Intel® IPT), used in conjunction with participating web sites, provides double identity authentication by adding a hardware component in addition to the usual user name and password. Intel® Identity Protection Technology (Intel® IPT) is initialized through an HP Client Security module.

³⁷ Optional

³⁸ 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.

³⁹ Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the workstation to communicate with other 802.11ac WLAN devices.

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