

# HP Z2 G8 Tower Workstation Desktop PC (646H9PA)



## Engineered to evolve.

We've engineered a whole new level of performance for entry workstations, so you can cut through rendering, visualization, BIM projects without missing a beat. And when your demands change, you have impressive expandability to upgrade.



HP recommends Windows 11 Pro for business

### **Your new benchmark for entry workstation power.**

Unleash the full power of professional graphics and an Intel® processor on compute-heavy projects. Designed for unthrottled performance so you can render and visualize projects faster.

### **Built to expand. Power to grow.**

Need to upgrade graphics? Increase memory or storage? Add specialized PCIe cards? Go for it. With room to expand and tool-less access, you can easily upgrade and add components as your needs evolve. This is an investment that will last for years.

### **Industry-leading security. Durability you can trust.**

Backed by 360K hours of rigorous testing, military-standard testing,[2] and software certs, every component is put to the test. And with hardened security features, your Z2 Tower is protected from the BIOS to the browser, above and below the OS.

## Featuring

### **Windows 10 Pro 64**

Work without compromising on performance or security with Windows 10 Pro, powered by HP's collaboration and connectivity technology.

### **Intel® Core™ i9 processor**

Get high-end performance for intensive tasks like rendering and video editing with the Intel® Core™ i9 processor. [1]

### **Smaller, Functional Design**

The stunning new design features front and rear ledges, so you can easily move your system from location to location.

## Specifications

<b>Form factor</b>	Tower
<b>Operating system</b>	Windows 10 Pro
<b>Processor family</b>	11th Generation Intel® Core™ i9 processor
<b>Processor</b>	Intel® Core™ i9-11900 (2.5 GHz base frequency, up to 5.2 GHz with Intel® Turbo Boost Technology, 16 MB L3 cache, 8 cores) <sup>[6,7]</sup>
<b>Chipset</b>	Intel® W580
<b>Memory</b>	32 GB DDR4-3200 MHz RAM (1 x 32 GB)
<b>Memory Slots</b>	4 DIMM
<b>Internal Storage</b>	2 TB HP Z Turbo Drive PCIe® NVMe™ TLC M.2 SSD
<b>Internal drive bays</b>	Two 3.5"; One 2.5" SSD
<b>External drive bays</b>	One 5.25"
<b>Optical drive</b>	9.5 mm Slim DVD-Writer
<b>Graphics</b>	Discrete
<b>Graphics (discrete)</b>	NVIDIA RTX™ A2000 (6 GB GDDR6 dedicated)
<b>Graphics</b>	Integrated
<b>Graphics (integrated)</b>	Intel® UHD Graphics 750
<b>Compatible displays</b>	All HP Z Displays and HP DreamColor Displays are supported. For more information see <a href="http://www.hp.com/go/zdisplays">www.hp.com/go/zdisplays</a>
<b>Audio</b>	Realtek ALC3205-VA2-CG, 2.0W internal mono speaker
<b>Minimum dimensions (W x D x H)</b>	35.6 x 16.9 x 38.5 cm (Standard tower orientation.)
<b>Minimum dimensions (W x D x H)</b>	14 x 6.7 x 15.2 in (Standard tower orientation.)
<b>Weight</b>	Starting at 7 kg (Exact weight depends on configuration.)
<b>Weight</b>	Starting at 15.43 lb (Exact weight depends on configuration.)
<b>Keyboard</b>	HP USB wired keyboard
<b>Pointing device</b>	HP Wired 320M Mouse
<b>Ports</b>	2 SuperSpeed USB Type-A 10Gbps signaling rate; 1 universal audio jack; 2 SuperSpeed Type-A USB 5Gbps signaling rate (1 charging)
<b>Expansion slots</b>	1 PCIe 3 x4 (x16 connector); 1 PCIe 3 x4 (x4 connector); 1 M.2 2230 PCIe 3 x1; 1 M.2 2280 PCIe 4 x4; 1 M.2 2280 PCIe 3 x4; 1 PCIe 3 x1 (x4 connector); 1 PCIe 4 x16 (x16 connector) (1 M.2 2230 slot for WLAN and 2 M.2 2280 slots for storage)
<b>Ports</b>	1 audio-in; 1 audio-out; 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
<b>Wireless</b>	Intel® AX201 Wi-Fi 6 (2x2) and Bluetooth® 5 combo, non-vPro®
<b>Management features</b>	HP Driver Packs; HP Management Integration Kit for Microsoft System Center Configuration Management Gen4; HP System Software Manager (download); HP BIOS Configuration Utility (download) <sup>[18]</sup>
<b>Sustainable impact specifications</b>	Ocean-bound plastic in speaker enclosure; 45% post-consumer recycled plastic; 20% ITE-derived closed loop plastic; Bulk packaging available; 80 Plus® Gold power supplies available; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable
<b>Security management</b>	HP Secure Erase; HP Power On Authentication; HP Sure Click; Windows Defender; HP Sure Sense; HP BIOSphere Gen6; HP Client Security Manager Gen7; HP Sure Start Gen7; HP Sure Run Gen4; HP Sure Recover Gen4 <sup>[19,20,21,22,23,24,25,26]</sup>
<b>Software included</b>	HP PC Hardware Diagnostics UEFI; HP Performance Advisor; HP Support Assistant; HP PC Hardware Diagnostics Windows; ZCentral Remote Boost; HP Desktop Support Utilities; HP Image Assistant; HP Notifications; My HP; HP QuickDrop <sup>[15,16,17]</sup>
<b>UPC number</b>	196548078004

## Top Recommended Displays, Accessories and Services

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### Keyboards

HP Wireless Premium Keyboard	Z9N41AA
HP USB Premium Keyboard	Z9N40AA
HP PS/2 Slim Business Keyboard	N3R86AA

### Mice

HP Wireless Premium Mouse	1JR31AA
HP Wired Desktop 320M Mouse	9VA80AA

### Graphics Cards

AMD Radeon Pro W5500 8GB 4DP GFX	9GC16AA
NVIDIA Quadro P400 2GB Graphics	1ME43AA
AMD Radeon Pro WX 3200 4GB (4)mDP GFX	6YT68AA

### DDR4 Memory

8GB (1x8GB) 3200 DDR4 ECC UDIMM	141J3AA
16GB (1x16GB) 3200 DDR4 NECC UDIMM	141H3AA
32GB (1x32GB) 3200 DDR4 ECC UDIMM	141H7AA

### PC SATA Hard Drives

HP 1TB SATA 6Gb/s 7200 Hard Drive	LQ037AA
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### PC Solid State Drives

HP ZTurbo 1TB PCIe-Gen 4x4 TLC Z2 SSDKit	201F5AA
HP ZTurbo 2TB 2280 PCIe-Gen4x4 Self Encrypted OPAL2 TLC M.2 Z2 SSD	223A4AA

## 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. Intel's numbering, branding and/or naming is not a measurement of higher performance.

[2] 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.

## Technical Specifications Footnotes

[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.

[15] HP ZCentral Remote Boost Sender does not come preinstalled on Z Workstations but can be downloaded and run on all Z desktop and laptops without license purchase through 2022. 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. ZCentral Remote Boost Sender for non-Z Hardware requires a license and Windows 10, 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. Requires network access. The software is available for download at [hp.com/ZCentralRemoteBoost](http://hp.com/ZCentralRemoteBoost).

[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] HP Support Assistant requires Windows and Internet access.

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

[19] HP Client Security Manager Gen7 requires Windows and is available on the select HP PCs.

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

[21] HP Sure Click requires Windows 11 Pro, Windows 10 Pro or Enterprise. See [https://bit.ly/2PrLT6A\\_SureClick](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 Run Gen4 is available on select Windows 10 based HP Pro, Elite and Workstation PCs with select Intel® or AMD processors

[24] 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.

[25] 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

[26] HP Sure Sense requires Windows 11 Pro 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.

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