

# HP Z2 Small Form Factor G9 Workstation (9H051PT)



## Full size Z tower power at half the size

Get all the power of a full size tower at a fraction of the size. Re-engineered to fit full-height, full-length graphics while leaving room for upgrades and expansion, the Z2 SFF delivers high performance for your intensive workflow —from 3D design to real time ray tracing —now and in the future.

HP recommends Windows 11 Pro for business

### Full height, full length performance

Design, simulate and real time ray trace on a Z SFF -- FHFL pro graphics and Intel® Core™ processors.

### Configurable for today. Expandable for tomorrow.

Accelerate your current workflow with options across processor, graphics, memory, storage, and I/O ports.

### ISV Certified

Work with confidence knowing your PC is certified with leading software applications to ensure peak performance.[3]

## Featuring

### Windows 11

Work anywhere without compromising on performance or security with Windows 11 powered by HP's collaboration and connectivity technology.

### Intel® Core™ i7 processor

Run several CPU-heavy programs simultaneously without sacrificing performance with an Intel® Core™ i7 processor. [4]

### Smaller, Functional Design

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

### Tool-less Access

Evolve your work. Evolve your rig. With a tool-less sliding access cover, you can easily get into the interior, and customize your Z to fit your needs.

### Thermal Management

Innovatively designed to keep hardware components cool and quiet no matter how hard you push it. Have confidence to run your system at max load 24/7.

## Specifications

<b>Operating system</b>	Windows 11 Pro
<b>Processor family</b>	13th Generation Intel® Core™ i7 processor
<b>Processor</b>	Intel® Core™ i7-13700 (up to 5.2 GHz with Intel® Turbo Boost Technology, 30 MB L3 cache, 16 cores, 24 threads) <sup>[6,7]</sup>
<b>Memory</b>	16 GB DDR5-4800 MHz RAM (1 x 16 GB)
<b>Internal Storage</b>	512 GB PCIe® Gen4 NVMe™ M.2 SSD
<b>Hard drive (2nd)</b>	1 TB 7200 rpm SATA HDD
<b>Internal drive bays</b>	One 2.5" HDD; One 3.5" HDD; Three M.2 NVME 2280 SSD
<b>External drive bays</b>	One 3.5" HDD; One slim ODD
<b>Graphics</b>	Discrete
<b>Graphics (discrete)</b>	NVIDIA® T400 (4 GB GDDR6 dedicated)
<b>Graphics</b>	Integrated
<b>Graphics (integrated)</b>	Intel® UHD Graphics
<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> (Supports 8 displays, driving 8 displays requires the use of integrated and discrete graphics ports. Each source can drive a total of 4 displays. At least one of the integrated graphics ports need to drive two displays in a daisy chain configuration.)
<b>Audio</b>	Realtek ALC3252
<b>Minimum dimensions (W x D x H)</b>	38.4 x 30.8 x 10 cm (Standard desktop orientation.)
<b>Minimum dimensions (W x D x H)</b>	15.1 x 12.1 x 3.95 in (Standard desktop orientation.)
<b>Weight</b>	Starting at 5.0 kg (Exact weights depend upon configuration (System weight only))
<b>Weight</b>	Starting at 11.1 lb (Exact weights depend upon configuration (System weight only))
<b>Keyboard</b>	HP USB 320K Keyboard
<b>Pointing device</b>	HP Wired 320M Mouse
<b>Ports</b>	1 SuperSpeed USB Type-C® 20Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 4 SuperSpeed USB Type-A 10Gbps signaling rate (1 charging); 1 universal audio jack
<b>Expansion slots</b>	1 half-height PCIe 4 x16; 1 half-height PCIe 3 x4; 1 half-height PCIe 3 x4 (x16 connector); 1 half-height PCIe 3 x1; 1 full-height PCIe 4 x16; 1 full-height PCIe 4 x16 (x16 connector) (1 M.2 2230 slot for WLAN and 3 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>Package dimensions (W x D x H)</b>	10 x 38.4 x 30.8 cm
<b>Package weight</b>	Starting at 5.9 kg
<b>Wireless</b>	Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card (supporting gigabit data rate)
<b>Power</b>	450 W 90% efficient, wide-ranging, active PFC <sup>[10]</sup>
<b>Ecolabels</b>	EPEAT® registered
<b>Energy star certified</b>	ENERGY STAR® certified
<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; 25% 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; Ocean-bound plastic in speaker enclosure and system fan; Contains recycled metal
<b>Security management</b>	HP Secure Erase; HP Sure Click; HP BIOSphere Gen6; HP Sure Admin; Hood Sensor Optional Kit; HP Client Security Manager Gen6; HP Sure Start Gen7; HP Sure Recover Gen4; HP Sure Sense Gen2; HP Sure Run Gen5 <sup>[19,20,21,22,23,24,25,26,31]</sup>
<b>Software included</b>	HP PC Hardware Diagnostics UEFI; HP Support Assistant; HP PC Hardware Diagnostics Windows; ZCentral Remote Boost; HP Image Assistant; HP Manageability Integration Kit; Performance Advisor 3.0 <sup>[15,16,17]</sup>
<b>UPC number</b>	197961549508

## Top Recommended Displays, Accessories and Services

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### Z Displays

HP Z34c G3 WQHD Curved Display	30A19AA
HP Z27k G3 4K USB-C Display	1B9T0AA
HP Z24m G3 QHD Conferencing Display	4Q8N9AA

## Messaging Footnotes

[3] Third party software sold separately.

[4] 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.

## Technical Specifications Footnotes

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

[10] Specific chassis required for 550 W 92% efficient, wide-ranging, active PFC power supply.

[15] 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 7 operating 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](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 10 Pro or higher 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 Gen5 is available on select HP PCs and requires Windows 10 and higher.

[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] HP 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 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.

[31] 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.

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