



HP Z2 Small Form Factor G9 Workstation (6E1Y7PA)

Overview

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.



Full height, full length performance

Design, simulate and—for the first time—real time ray trace on a Z2 SFF. Now fitting full height, full length professional graphics and Intel® processors, this PC delivers tower-sized performance that defies space constraints.

Industry leading security. Reliability you can trust.

Get peace of mind with a PC that's built to endure. The Z2 SFF undergoes 360K hours of rigorous testing, military-standard testing[1] and is certified for pro apps. And with HP Wolf Security for Business[2], it's protected below, in and above the OS.

Configurable for today. Expandable for tomorrow.

Accelerate your current workflow with a multitude of options across processor, graphics, memory, storage, and I/O ports. And with plenty of room to upgrade and expand, this PC is ready to grow with you as your workflow evolves.

Features

Intel® Core™ i7 processor

Run several CPU-heavy programs simultaneously without sacrificing performance with an Intel® Core™ i7 processor.^[3]

NVIDIA® Quadro® Graphics

Experience high-end visualization and seamlessly render your biggest projects with the next generation NVIDIA® Quadro® T-Series graphics; Certified and supported for the apps you use every day.

[1] HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features and OS requirement.

[2] 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 or damage under these test conditions requires an optional HP Accidental Damage Protection Care Pack.

[3] 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.

Specifications

Operating system	Windows 11 Pro
Processor family	12th Generation Intel® Core™ i7 processor
Processor	Intel® Core™ i7-12700 (up to 4.9 GHz with Intel® Turbo Boost Technology, 25 MB L3 cache, 12 cores, 20 threads) ^[6,7]
Memory	16 GB DDR5-4800 MHz RAM (1 x 16 GB)
Internal Storage	512 GB PCIe® M.2 SSD
Hard drive (2nd)	1 TB 7200 rpm SATA HDD
Internal drive bays	One 2.5" HDD; One 3.5" HDD; Three M.2 NVME 2280 SSD
External drive bays	One 3.5" HDD; One slim ODD
Optical drive	Not included
Graphics	Integrated
Graphics (integrated)	Intel® UHD Graphics 770
Compatible displays	All HP Z Displays and HP DreamColor Displays are supported. For more information see www.hp.com/go/zdisplays <i>(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.)</i>
Audio	Realtek ALC3205-VA2-CG, 2.0W internal mono speaker
Minimum dimensions (W x D x H)	38.4 x 30.8 x 10 cm <i>(Standard desktop orientation.)</i>
Minimum dimensions (W x D x H)	15.1 x 12.1 x 3.95 in <i>(Standard desktop orientation.)</i>
Weight	Starting at 5.9 kg <i>(Exact weight depends on configuration.)</i>
Weight	Starting at 13.1 lb <i>(Exact weight depends on configuration.)</i>
Keyboard	HP USB 320K Keyboard
Pointing device	HP Wired 320M Mouse
Ports	4 SuperSpeed USB Type-A 10Gbps signaling rate (1 charging); 1 universal audio jack
Expansion slots	1 PCIe 3 x4 (x16 connector); 1 PCIe 3 x4 (x4 connector); 1 PCIe 3 x1 (x4 connector); 1 PCIe 4 x16 (x16 connector); 3 M.2 2280 PCIe 4 X4 for NVMe; 1 M.2 2230 PCIe 3 X1 for WLAN <i>(1 M.2 2230 slot for WLAN and 3 M.2 2280 slots for storage)</i>
Ports	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
Power	450 W 90% efficient, wide-ranging, active PFC ^[10]
Ecolabels	EPEAT® registered
Energy star certified	ENERGY STAR® certified

Management features

HP Driver Packs; HP Management Integration Kit for Microsoft System Center Configuration Management Gen4; HP System Software Manager (download); HP BIOS Configuration Utility (download)^[18]

Sustainable impact specifications

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

Security management

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^[19,20,21,22,23,24,25,26,31]

Software included

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^[15,16,17]

UPC number

196548785018

Additional specifications

ECC memory	non-ECC
Graphic card footnote number	[30]
Graphics	Discrete
Graphics (discrete)	NVIDIA® Quadro® T1000 (4 GB GDDR6 dedicated)
Graphics card brand	NVIDIA®
Graphics card family	Quadro®
Graphics card memory size	4
Graphics card memory size uom	GB
Graphics card memory type	GDDR6
I/O Port location	Front
I/O Port location	Rear
Keyboard interface	USB
Legal tagline	HP recommends Windows 11 Pro for business
Memory and storage	16 GB memory; 1 TB HDD storage; 512 GB SSD storage
Memory layout (slots & size)	1 x 16 GB
Memory module type	DIMM
Memory size	16
Memory size uom	GB
Memory speed	4800
Memory speed uom	MHz
Memory type	DDR5
Model Number	T1000
Number of memory slots	1
Processor Brand	Intel®
Processor base frequency	2.1
Processor cache	25 MB L3
Processor core	12
Processor family	Core™ i7
Processor frequency UOM	GHz
Processor frequency technology	Intel® Turbo Boost Technology
Processor generation	12th Generation
Processor maximum frequency	4.9
Processor maximum frequency uom	GHz
Processor model	12700

Processor threads	20
Product long name specifications	HP Z2 Small Form Factor G9 Workstation, Windows 11 Pro, Intel® Core™ i7, 16GB RAM, 512GB SSD, 1TB HDD, NVIDIA® Quadro® T1000
Product short name specifications	HP Z2 Small Form Factor G9 Workstation, Intel® Core™ i7, 16GB RAM, 512GB SSD, 1TB HDD
Standard memory note	Transfer rates up to 4800 MT/s.
Storage capacity	512
Storage capacity 02	1
Storage capacity uom 01	GB
Storage capacity uom 02	TB
Storage controller	Integrated SATA (4 ports 6 Gb/s) with integrated RAID 0, 1, for PCIe SSDs supported. Requires identical hard drives (speeds, capacity, interface).
Storage form factor 01	M.2
Storage interface 01	PCIe®
Storage interface 02	SATA
Storage speed 02	7200
Storage speed uom 02	rpm
Storage type	HDD; SSD
Storage type 01	SSD
Storage type 02	HDD
UNSPSC code	43211515

[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.

[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.

[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 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.

Accessories

Memory

★ : Recommended

DDR4 Memory

16GB DDR5 (1x16GB) 4800 UDIMM NECC Memory	4M9Y0AT
32GB DDR5 (1x32GB) 4800 UDIMM NECC Memory	4M9Y2AT
8GB DDR5 (1x8GB) 4800 UDIMM NECC Memory	4M9X9AT

PC Drives and Storage

PC Solid State Drives

1TB 2280 PCIe-4x4 NVMe Value M.2 Z2 Kit SSD	4M9Z3AA
512GB 2280 PCIe-4x4 NVMe Value M.2 Z2 Kit SSD	4M9Z2AA
HP Z Turbo Drive 2TB TLC Z8 G4 SSD Kit	201F8AA
HP ZTurbo 1TB 2280 PCIe-Gen4x4 Self Encrypted OPAL2 TLC M.2 Z2 SSD	223A3AA
HP ZTurbo 1TB 2280 PCIe-Gen4x4 Self Encrypted OPAL2 TLC M.2 Z2 SSD	223A3AT
HP ZTurbo 1TB PCIe-Gen 4x4 TLC Z2 SSDKit	201F5AA
HP ZTurbo 1TB PCIe-Gen 4x4 TLC Z2 SSDKit	201F5AT
HP ZTurbo 2TB 2280 PCIe-Gen4x4 Self Encrypted OPAL2 TLC M.2 Z2 SSD	223A4AA
HP ZTurbo 2TB 2280 PCIe-Gen4x4 Self Encrypted OPAL2 TLC M.2 Z2 SSD	223A4AT
HP ZTurbo 512GB PCIe-Gen 4x4 SED Z2 SSDKit	201F9AA
HP ZTurbo 512GB PCIe-Gen 4x4 TLC Z2 SSDKit	201G0AA
HP ZTurbo 512GB PCIe-Gen 4x4 TLC Z2 SSDKit	201G0AT
Z Turbo 1TB 2280 PCIe-4x4 SED OPAL2 TLC M.2 SSD Module	38T76AA
Z Turbo 1TB PCIe-4x4 TLC SSD Module	38T77AA
Z Turbo 2TB 2280 PCIe-4x4 SED OPAL2 TLC M.2 SSD Module	38T79AA
Z Turbo 2TB PCIe-4x4 TLC SSD Module	38T75AA
Z Turbo 512GB 2280 PCIe-4x4 SED OPAL2 TLC M.2 SSD Module	38T81AA
Z Turbo 512GB PCIe-4x4 TLC SSD Module	38T80AA

PC SATA Hard Drives

HP 2TB SATA 6Gb/s 7200 Hard Drive	QB576AA
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Keyboards/Mice and Input Devices

Keyboards

HP 125 Wired Keyboard	266C9AA
HP 125 Wired Keyboard	266C9UT
HP 455 Programmable Wireless Keyboard	4R177AA
HP 975 Dual-Mode Wireless Keyboard	3Z726UT
HP Wired Desktop 320K Keyboard	9SR37AA
HP Wired Desktop 320K Keyboard	9SR37ET
HP Wired Desktop 320K Keyboard	9SR37UT

Mice

HP 125 Wired Mouse	265A9AA
HP 125 Wired Mouse	265A9UT
HP Wired Desktop 320M Mouse	9VA80AA
HP Wired Desktop 320M Mouse	9VA80ET
HP Wired Desktop 320M Mouse	9VA80UT

Keyboard and Mouse Kits

HP 655 Wireless Keyboard and Mouse Combo	4R009AA
HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
HP Wired Desktop 320MK Mouse and Keyboard	9SR36ET
HP Wired Desktop 320MK Mouse and Keyboard	9SR36UT

Expansion Solution and Controller Cards

Port Adapters

HP 1GbE LAN Flex Port 2020	141J6AA
HP DP Flex Port 2020	141J7AA
HP Dual USB-A 3.2 Gen1 Flex 2020	141J8AA
HP PCIe x1 Parallel Port Card	N1M40AA
HP PCIe x1 Parallel Port Card	N1M40AT
HP USB-C 3.2 Gen2 Alt Flex Port 2020	141K6AA
HP VGA Flex Port 2020	141K7AA
HP Z2 G5 2nd serial port adapter	141K8AA
HP Z2 G5 Internal Serial and PS/2 Port	141K9AA

Security and Protection

PC Locks

HP Business PC Security Lock v3 Kit	3XJ17AA
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HP Business PC Security Lock v3 Kit	3XJ17AT
HP Keyed Cable Lock 10 mm	T1A62AA
HP Keyed Cable Lock 10 mm	T1A62UT
HP Master Keyed Cable Lock 10mm	T1A63AA
HP Master Keyed Cable Lock 10mm	T1A63UT

Cables/Cable Kits/Cable Adapters

Audio and Video Cables

HP DisplayPort To VGA Adapter	AS615A6
HP DisplayPort To VGA Adapter	AS615AA
HP DisplayPort To VGA Adapter	AS615AT
HP DisplayPort To VGA Adapter	F7W97AA
HP DisplayPort to DVI-D Adapter	FH973AA
HP DisplayPort to DVI-D Adapter	FH973AT
HP DisplayPort to DVI-D Adapter (Bulk 90)	FH973A6
HP DisplayPort to HDMI True 4K Adapter	2JA63AA

Cable Adapters

HP Single miniDP-to-DP Adapter Cable	2MY05AA
HP USB-C to DP Adapter	4SH08AA
HP USB-C to HDMI Adapter	4SH07AA
HP USB-C to VGA Adapter	4SH06AA

Audio/Multimedia and Communication Devices

Headsets

HP Reverb G2 Virtual Reality Headset	1N0T4AA
HP Reverb Virtual Reality Headset G2 (359V7AV)	428Z7AA

Batteries/Chargers/Adapters

Power Cords

HP Z2 Power Cord Kit M	1N1D5AA
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Chassis and Chassis Accessories

Brackets/Bezels/Panels

HP Z2 SFF Dust Filter	4N002AA	obsolete
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PC Controller/Controller Options

PC Processor Cards

Intel I225V Single Port 2.5GbE PCIe NIC

406L9AA

Graphics Cards

Graphics Cards

NVIDIA T1000 8 GB 4mDP Graphics

5Z7D8AA

NVIDIA T1000 8 GB 4mDP Graphics

5Z7D8AT

HyperX Gaming Peripherals

HyperX Gaming Headsets

★ : Recommended

HyperX Cloud Headsets SC

HyperX Cloud Core + 7.1 - Gaming Headset (Black)	4P4F2AA
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HyperX Cloud Flight Headsets SC

HyperX Cloud Flight - Wireless Gaming Headset (Black-Red)	4P5L4AA
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HyperX Cloud MIX Headsets SC

HyperX Cloud MIX - Gaming Headset (Black-Gunmetal)	4P5K9AA
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HyperX Cloud Stinger Headsets SC

HyperX Cloud Stinger Core - Gaming Headset (Black)	4P4F4AA
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HyperX Microphones

HyperX SoloCast Microphones SC

HyperX SoloCast - USB Microphone (Black)	4P5P8AA
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