



HP Z2 Tower G5 Workstation (644B1UT)



Overview

Our most powerful entry workstation that redefines expectations.

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

Your new benchmark for entry workstation power.

Unleash the full power of professional graphics and Intel® processors on your compute-heavy workloads. We've designed the system for zero throttling, so your components always run at top speeds without ever overheating or slowing down.

We test it so you can trust it. 24/7.

We know you need performance you can rely on. That's why our products endure over 360K hours of rigorous testing, MIL-STD testing[1] and software certifications.

Built to expand. Power to grow.

Need to swap graphics cards? Boost CPU power? Add specialized PCIe cards? Go for it. Our most expandable entry workstation is an investment that will last for years.

HP's most secure workstation.

Advanced security features come standard on every Z2 Tower. System safeguards like self-healing BIOS help lock your device, data and identity down tight.

Features

Intel® Core™ i5 processor

Experience powerful performance and seamless computing for your everyday tasks and higher performance needs with the Intel® Core™ i5 processor.^[2]

Security is your top priority

The HP Wolf Pro Security Edition provides preconfigured enterprise-level PC protection for small and medium sized businesses.

Smaller, Functional Design

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

[1]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.

[2] 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

Form factor	Tower
Operating system	Windows 11 Pro
Processor family	10th Generation Intel® Core™ i5 processor
Processor	Intel® Core™ i5-10500 (3.1 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 12 MB L3 cache, 6 cores) ^[6,7]
Chipset	Intel® W480
Memory	16 GB DDR4-3200 MHz RAM (1 x 16 GB)
Memory Slots	4 DIMM
Internal Storage	512 GB HP Z Turbo Drive PCIe® NVMe™ TLC SSD
Internal drive bays	Two 3.5"; Two M.2 NVME 2280 SSD
External drive bays	One 5.25"
Optical drive	Not included
Graphics	Integrated
Graphics (integrated)	Intel® HD Graphics 630
Compatible displays	All HP Z Displays and HP DreamColor Displays are supported.
Audio	Realtek ALC3205-VA2-CG, 2.0W internal mono speaker
Minimum dimensions (W x D x H)	35.6 x 16.9 x 38.5 cm (Standard tower orientation.)
Minimum dimensions (W x D x H)	14 x 6.7 x 15.2 in (Standard tower orientation.)
Weight	Starting at 7 kg (Exact weight depends on configuration.)
Weight	Starting at 15.43 lb (Exact weight depends on configuration.)
Keyboard	HP Wired Desktop 320K Keyboard
Pointing device	HP Wired 320M Mouse
Ports	1 headphone/microphone combo; 2 SuperSpeed USB Type-A 10Gbps signaling rate; 2 SuperSpeed USB Type-A 5Gbps signaling rate
Expansion slots	1 PCIe 3 x4 (x16 connector); 1 PCIe 3 x16 (x16 connector); 1 M.2 2230 PCIe 3 x1; 2 M.2 2280 PCIe 3 x4; 2 PCIe® 3 x1 (x4 connector) (1 M.2 slot for WLAN and 2 M.2 2230/2280 slot for storage.)
Ports	1 audio-in; 1 audio-out; 1 RJ-45; 2 USB 2.0; 2 DisplayPort™ 1.4; 2 SuperSpeed USB Type-A 5Gbps signaling rate; 2 SuperSpeed USB Type-A 10Gbps signaling rate
Sustainable impact specifications	Low halogen

Security management	HP Business PC Security Lock Kit; HP Keyed Cable Lock Kit; HP Solenoid Hood Lock and Sensor; HP UltraSlim Cable Lock Kit; HP Secure Erase; HP Sure Click; HP Sure Sense; HP Sure Start Gen6; HP Sure Run Gen3; HP Sure Recover Gen3; HP BIOSphere Gen6; HP Sure Admin; HP Client Security Manager Gen6 ^[15,22,24,25,26,27,28,29,32,34]
Software included	HP PC Hardware Diagnostics UEFI; HP Performance Advisor; HP Support Assistant; HP PC Hardware Diagnostics Windows; ZCentral Remote Boost; HP Image Assistant; HP Manageability Integration Kit ^[12,16,21,23]
UPC number	196548065677
Manufacturer Warranty	Protected by HP, including a 3 year standard limited warranty. Optional HP Care Pack Services are extended service contracts that extend your protection beyond the standard warranties. Service levels and response times for HP Care Packs may vary depending on your geographic location. Service starts on date of hardware purchase. Restrictions and limitations apply. For details, visit www.hp.com/go/cpc

Additional specifications

Additional information about HP in the countries	hp.com
Datasheet photo 1	AHID/050ca2fa66cc5651af62e146834b5dc348ad40c8
Datasheet photo 3	AHID/bc2e9daf9797e60e9a86c95a0ef4e336d12ccf06
Datasheet photo 4	AHID/0cd28b490009550e5956f11350a8e4d50617d889
Datasheet photo 5	AHID/488e798567ae5cc70f962ca02bcc4a230ea85f8d
ECC memory	non-ECC
I/O Port location	Front
I/O Port location	Rear
Keyboard connectivity	wired
Legal tagline	HP recommends Windows 11 Pro for business
Memory and storage	16 GB memory; 512 GB SSD storage
Memory layout (slots & size)	1 x 16 GB
Memory module type	UDIMM
Memory size	16
Memory size uom	GB
Memory speed	3200
Memory speed uom	MHz
Memory type	DDR4
Number of memory slots	1
Processor Brand	Intel®
Processor base frequency	3.1
Processor cache	12 MB L3
Processor core	6
Processor family	Core™ i5
Processor frequency UOM	GHz
Processor frequency technology	Intel® Turbo Boost Technology
Processor generation	10th Generation
Processor maximum frequency	4.5
Processor maximum frequency uom	GHz
Processor model	10500
Processor threads	12

Product long name specifications	HP Z2 Tower G5 Workstation, Windows 11 Pro, Intel® Core™ i5, 16GB RAM, 512GB SSD
Security Software Licenses	HP Wolf Pro Security Edition (1 year)
Standard memory note	Transfer rates up to 3200 MT/s.
Storage brand 01	HP Z Turbo Drive
Storage capacity	512
Storage capacity uom 01	GB
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 interface 01	PCIe®
Storage interface protocol 01	NVMe™
Storage memory technology 01	TLC
Storage type	SSD
Storage type 01	SSD
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.

[12] 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 7operating 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.

[15] HP Client Security Manager Gen6 requires Windows and is available on the select HP PCs.

[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>

[21] HP Support Assistant requires Windows and Internet access.

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

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

[24]HP Client Security Manager Gen6 requires Windows and is available on the select HP PCs.

[25] HP Sure Click requires Windows 11 Pro or Windows 10 Pro or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

[26] HP Sure Start Gen 6 is available on select HP PCs and workstations. See product specifications for availability.

[27] HP Sure Run Gen3 is available on select Windows 11 or Windows 10 based HP Pro, Elite and Workstation PCs with select Intel® or AMD processors

[28] HP Sure Recover Gen3 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.

[29] 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

[32] HP Sure Sense requires Windows 11, 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.

[34] HP Sure Admin requires Windows 11 or Windows 10, 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

32GB (1x32GB) 3200 DDR4 ECC UDIMM	141H7AA ★
16GB (1x16GB) 3200 DDR4 ECC UDIMM	141H2AA ★
8GB (1x8GB) 3200 DDR4 NECC UDIMM	141J4AA ★
16GB (1x16GB) 3200 DDR4 ECC UDIMM	141H2AT
16GB (1x16GB) 3200 DDR4 NECC UDIMM	141H3AA
16GB (1x16GB) 3200 DDR4 NECC UDIMM	141H3AT
32GB (1x32GB) 3200 DDR4 NECC UDIMM	141H9AA
32GB (1x32GB) 3200 DDR4 NECC UDIMM	141H9AT
4GB (1x4GB) 3200 DDR4 NECC UDIMM	141J1AA
4GB (1x4GB) 3200 DDR4 NECC UDIMM	141J1AT
8GB (1x8GB) 3200 DDR4 ECC UDIMM	141J3AA
8GB (1x8GB) 3200 DDR4 ECC UDIMM	141J3AT
8GB (1x8GB) 3200 DDR4 NECC UDIMM	141J4AT

Keyboards/Mice and Input Devices

Keyboards

HP Wireless Premium Keyboard	Z9N41AA ★
HP USB Premium Keyboard	Z9N40AA
HP Wired Desktop 320K Keyboard	9SR37AA
HP Wired Desktop 320K Keyboard	9SR37UT

Mice

HP Wireless Premium Mouse	1JR31AA ★
HP Wired Desktop 320M Mouse	9VA80AA
HP Wired Desktop 320M Mouse	9VA80UT
HP Wireless Premium Mouse	1JR31UT

Keyboard and Mouse Kits

HP Wired Desktop 320MK Mouse and Keyboard	9SR36AA
HP Wired Desktop 320MK Mouse and Keyboard	9SR36UT

Graphics Cards

Graphics Cards

AMD Radeon Pro WX 3200 4GB (4)mDP GFX	6YT68AA ★
AMD Radeon Pro W6600 8GB GDDR6 4DP Graphics	340K5AA
AMD Radeon Pro WX 3200 4GB (4)mDP GFX	6YT68AT
NVIDIA Quadro P2200 5GB (4)DP GFX	6YT67AA
NVIDIA Quadro P2200 5GB (4)DP GFX	6YT67AT
NVIDIA Quadro P400 2GB Graphics	1ME43AA
NVIDIA Quadro P400 2GB Graphics	1ME43AT
NVIDIA Quadro RTX 4000 8GB (3)DP+USBc	5JV89AA
NVIDIA Quadro RTX 4000 8GB (3)DP+USBc	5JV89AT
NVIDIA Quadro RTX 5000 16GB (4)DP+USBc	5JH81AA
NVIDIA Quadro RTX 5000 16GB (4)DP+USBc	5JH81AT
NVIDIA Quadro RTX 6000 24GB (4)DP+USBc	5JH80AA
NVIDIA Quadro RTX 6000 24GB (4)DP+USBc	5JH80AT
NVIDIA Quadro T1000 4GB 4mDP Graphics	20X22AA
NVIDIA RTX A4000 16 GB 4DP Graphics	20X24AA
NVIDIA RTX A4000 16 GB 4DP Graphics	20X24AT
NVIDIA T400 2 GB GDDR6 LP Blower Fan 3mDP PCIe x16 Graphics	340K8AA
NVIDIA T600 4 GB GDDR6 LP Blower Fan 4mDP PCIe x16 Graphics	340K9AA

PC Drives and Storage

PC SATA Hard Drives

2TB 7200RPM SATA 3.5in Enterprise	2Z274AA
8TB 7200RPM SATA 3.5in Enterprise	2Z273AA
HP 1TB Enterprise SATA 7200 HDD	W0R10AA
HP 1TB SATA 6Gb/s 7200 Hard Drive	LQ037AA
HP 1TB SATA 6Gb/s 7200 Hard Drive	LQ037AT
HP 4TB SATA 7200 Hard Drive	K4T76AA
HP 4TB SATA 7200 Hard Drive	K4T76AT
HP 500GB 7200rpm SATA SFF SED Hard Drive	D8N29AA
HP 500GB SATA 6Gb/s 7200 Hard Drive	LQ036AA
HP 500GB SATA 6Gb/s 7200 Hard Drive	LQ036AT
HP 6TB Enterprise SATA 7200 HDD	3DH90AA

PC Solid State Drives

HP 2TB PCIe NVME TLC M.2 Z2 G5 TWR/SFF SSD	35F73AA
HP Z Turbo Drive 2TB TLC Z8 G4 SSD Kit	2Y7W5AA
HP ZTurbo 512GB SED Z2 G5 TWR/SFF SSDKit	141M3AT
HP ZTurbo 512GB TLC Z2 G5 TWR/SFF SSDKit	141M5AT

Removable Hard Drive Enclosure

HP 4-in-1 SFF (2.5in) HDD Carrier	B8K60AA
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PC DVD-ROM Drives

HP Z2 TWR DVD-ROM 9.5mm Slim ODD	4L5K1AA
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PC DVD Drives

HP Z2 TWR DVD-Writer 9.5mm Slim ODD	4L5K0AA
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PC Networking Adapters

PC Fast Ethernet Adapters

Allied Telesis AT-2914SX/LC-901 1GB LC Fiber NIC	1C7Q2AA
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PC Controller/Controller Options

PC Processor Cards

Aquantia NBASE-T 5GbE PCIe NIC	1PM63AA
Intel Ethernet I210-T1 GbE NIC	E0X95AA
Intel Ethernet I350-T2 2-Port 1Gb NIC	V4A91AA
Intel Ethernet I350-T4 4-Port 1Gb NIC	W8X25AA

Expansion Solution and Controller Cards

Port Adapters

HP DP Flex Port 2020	141J7AA
HP Flex 1GbE Fiber LC Single Port	20J15AA
HP PCIe x1 Parallel Port Card	N1M40AA
HP PCIe x1 Parallel Port Card	N1M40AT

Cables/Cable Kits/Cable Adapters

Audio and Video Cables

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 HDMI True 4K Adapter	2JA63AA

Cable Adapters

HP Single miniDP-to-DP Adapter Cable	2MY05AA
HP USB-C to DP Adapter	4SH08AA

Point of Sales System Options

POS Display Accessories

HP L7010t 10.1-inch Retail Touch Monitor	T6N30AA
HP L7014 14-inch Retail Monitor	T6N31AA
HP L7014t 14-inch Retail Touch Monitor	T6N32AA
HP L7016t 15.6-inch Retail Touch Monitor	V1X13AA

Chassis and Chassis Accessories

Brackets/Bezels/Panels

HP Optical Bay HDD Mounting Bracket	NQ099AA
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PC Accelerators

PC IO Accelerators

HP Thunderbolt 3.0 PCIe Card Z2 Tower	141M7AA
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Rack Brackets/Bezels/ Panels/Rails/ Trays/Mounting

Rack Kits

HP Z2 Mini/Z2 Tower/Z4/Z6 Depth Adjustable Fixed Rail Rack Kit	2A8Y5AA
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Batteries/Chargers/Adapters

Power Cords

HP Z2 Power Cord Kit M	1N1D5AA
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Network Adapters

Adapter Cards

Intel X550 10GBASE-T Dual Port NIC	1QL46AA
Intel X710-DA2 10GbE SFP+ DP NIC	1QL47AA

Services

HP Care Pack Services

★ : Recommended

Personal Systems Hardware Support Onsite Service

HP 4 year Next Business Day Response Onsite Workstation Hardware Support	U1G37E ★
HP 1 year PW Next Business Day Response Onsite w/Defective MediaRetention WS HW Supp	U1G23PE
HP 1 year PW Next business day Response onsite WS HW Supp	U1G24PE
HP 3 year Next Business Day Onsite Optional CSR Workstations HardwareSupport	U1G59E
HP 3 year Next Business Day Response Onsite w/Accidental DamageProtection WS Supp	U0A88E
HP 3 year Next Business Day Response Onsite w/Defective Media RetentionWS HW Supp	U1G55E
HP 3y NBD ONS w/Accidental Damage Protection/Defective Media RetentionWS (Low End) HW Supp	U9WU5E
HP 4 year Next Business Day Response Onsite w/Accidental DamageProtection WS HW Supp	U0A89E
HP 4 year Next Business Day Response Onsite w/Defective Media RetentionWS HW Supp	U1G56E
HP 4y NBD ONS w/Accidental Damage Protection/Defective Media RetentionWS (Low End) HW Supp	U9WU6E
HP 5 year Next Business Day Response Onsite Workstation Hardware Support	U1G39E
HP 5 year Next Business Day Response Onsite w/Accidental DamageProtection Workstation HW Supp	U1G62E
HP 5 year Next Business Day Response Onsite w/Defective Media RetentionWS HW Supp	U1G57E
HP 5y NBD ONS w/Accidental Damage Protection/Defective Media RetentionWS (Low End) HW Supp	U9WU7E
HP 5y NBD Resp Onsite w/Accidental Damage Protection/Defective MediaRetention WS HW Supp	HL565E

Personal Systems Commercial Care Pack Services

HP 4 year Active Care Next Business Day Response Onsite WorkstationHardware Support	U22KBE ★
HP 5 year Active Care Next Business Day Resp Onsite w/Defective MediaRetention WS HW Supp	U22KGE ★
HP 3 year Active Care Next Business Day Resp Onsite w/Defective MediaRetention WS HW Supp	U22KDE
HP 3 year Active Care Next Business Day Response Onsite WorkstationHardware Support	U22K9E

HP 3 year Data Recovery Desktop Hardware Support	UE372E
HP 3 year Data Recovery-OS Restore Onsite (6 calls) (Promo) Desktop Hardware Support	U9AN7E
HP 4 year Active Care Next Business Day Resp Onsite w/Defective MediaRetention WS HW Supp	U22KFE
HP 5 year Active Care Next Business Day Response Onsite WorkstationHardware Support	U22KCE

Monitors

Business Monitors

★ : Recommended

Z Displays

HP Z32 31.5-inch 4K UHD Display	1AA81A4 ★
HP Z24f G3 FHD Display	3G828AA
HP Z24n G3 WUXGA Display	1C4Z5AA
HP Z24u G3 WUXGA USB-C Display	1C4Z6AA
HP Z25xs G3 QHD USB-C DreamColor Display	1A9C9AA
HP Z27k G3 4K USB-C Display	1B9T0AA
HP Z27q G3 QHD Display	1C4Z7AA
HP Z27u G3 QHD Display	1B9X2AA
HP Z27xs G3 4K USB-C DreamColor Display	1A9M8AA
HP Z38c 37.5-inch Curved Display	Z4W65A4
HP Z43 42.5-inch 4K UHD Display	1AA85A4

E-Series

HP E22 G4 FHD Monitor	9VH72AA
HP E23 G4 FHD Monitor	9VF96AA
HP E24 G4 FHD Monitor	9VF99AA
HP E24i G4 WUXGA Monitor	9VJ40AA
HP E24mv G4 FHD Conferencing Monitor	169L0AA
HP E24q G4 QHD Monitor	9VG12AA
HP E24t G4 FHD Touch Monitor	9VH85AA
HP E24u G4 FHD USB-C Monitor	189T0AA
HP E27 G4 FHD Monitor	9VG71AA
HP E27q G4 QHD Monitor	9VG82AA
HP E27u G4 QHD USB-C Monitor	189T3AA

Healthcare Edition Displays

HP Healthcare Edition HC241 Clinical Review Monitor	3ME68AA
HP Healthcare Edition HC241p Clinical Review Monitor	3ME69AA

ProDisplays

HP Mini-in-One 24 Display	7AX23AA
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P-Series

HP P22 G4 22 FHD Monitor	1A7E4AA
HP P22h G4 FHD Monitor	7UZ36AA
HP P24 G4 24 FHD Monitor	1A7E5AA

Software

Remote Connectivity Software

★ : Recommended

Workstation Remote Connectivity Software

HP ZCentral Connect 2020 E-LTU	9TS59AAE	obsolete
HP ZCentral Remote Boost 2020 Floating E-LTU	9TS61AAE	
HP ZCentral Remote Boost 2020 Standard E-LTU	9TS60AAE	

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