

### Overview

#### HP Z4 G6i Workstation Desktop PC



#### Front View

1. Integrated Front Handle
2. Power Button
3. HDD Activity LED
4. Headphone/Microphone combo
5. Front I/O Premium: 2 SuperSpeed USB Type-C™ 20 Gbps signaling rate (USB Power Delivery 3.0), 2 SuperSpeed USB Type-A 5 Gbps signaling rate [left-most Type-A port has Charging Capability]  
Front I/O Entry: 4 SuperSpeed USB Type-A 5 Gbps signaling rate [left-most Type-A port has Charging Capability]
6. SD Card Reader<sup>2</sup>
7. External 5.25" bay

1. Front IO Entry is shown on Photography

2. SD Card Reader available separately



### Overview

#### HP Z4 G6i Workstation Desktop PC

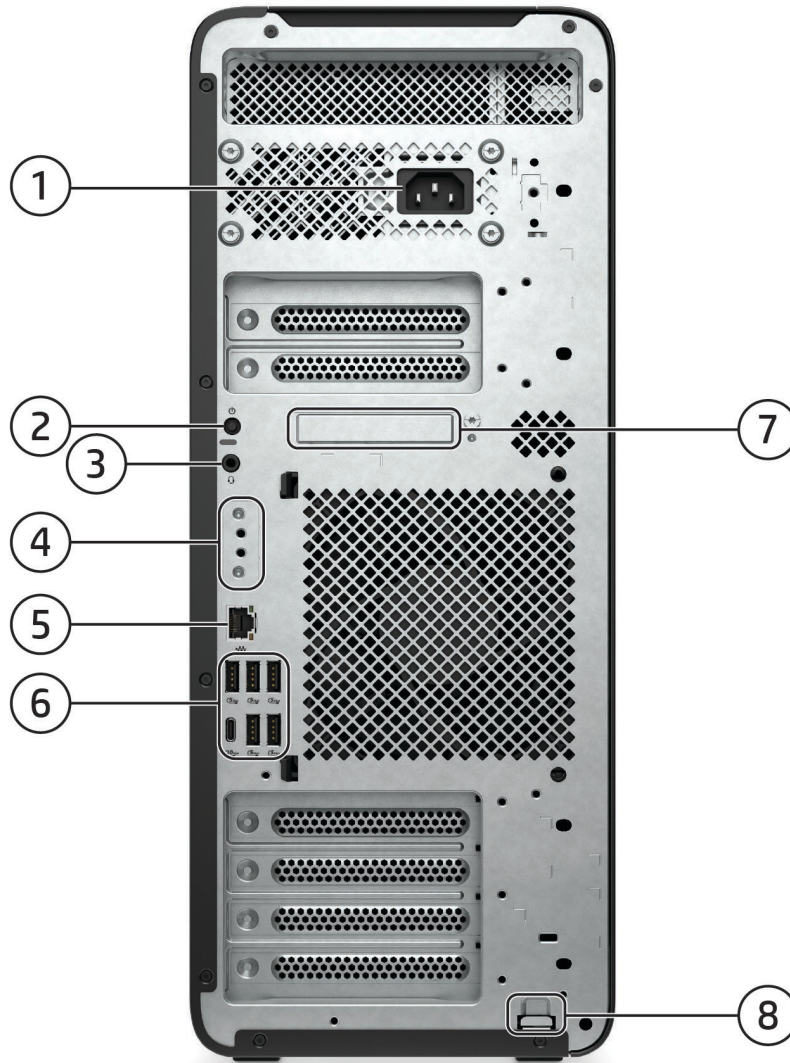


#### Internal View

1. Intel® Xeon® 600 Processors
2. 8 DIMM slots for DDR5 ECC Memory
3.
  - Slot 1: PCIe x16 Gen5
  - Slot 2: PCIe x4 Gen5
  - Slot 3: PCIe x16 Gen5
  - Slot 4: PCIe x4 Gen4
  - Slot 5: PCIe x16 Gen5
4. 1 External 5.25" bays
5. 1 Internal 3.5" bays
6. 1 Internal NVMe connectors to Front Removable M.2/U.2 Carrier
7. 4 Gen5 M.2 slots on-board
8. 2 SATA Ports
9. 2 Internal USB Ports: 1x USB 2.0 and 1x USB 3.0

### Overview

#### HP Z4 G6i Workstation Desktop PC



#### Rear View

1. Choice of 2 Power Supplies:
  - 775W, Platinum Rated (92% Efficient)
  - 1350W @110V or 1700W @200V, Platinum Rated (92% Efficient)
2. Rear Power Button
3. Universal Audio Jack with Retasking
4. Flex IO Port.
5. 1x 1GbE AMT RJ-45 integrated LAN port
6. 5x 5Gb SuperSpeed Type-A USB, 1x 10Gb SuperSpeed+ Type-C USB
7. 2x 10GbE or 2x 25GbE LAN ports (optional)
8. Rear Padlock Loop Pullout



### Technical Specifications

#### FORM FACTOR

Tower

#### OPERATING SYSTEMS

##### Preinstalled:

- Windows 11 Pro for Workstations<sup>1</sup>
- Ubuntu® 24.04 LTS<sup>2</sup>
- HP Linux®-ready<sup>3</sup>
- Red Hat® Enterprise Linux® Desktop Workstation (Paper license with 1 year support; no preinstalled OS)<sup>3</sup>

##### Supported:

- Windows 11, version 24H2, 25H2<sup>1</sup>
- Red Hat® Enterprise Linux® Workstation 9 & 10<sup>3</sup>
- SUSE Linux® Enterprise Desktop 15 & 16<sup>3</sup>
- Ubuntu® 24.04 LTS<sup>2</sup>

##### Web-supported only:

- Windows 11 Enterprise<sup>1</sup>

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 11 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. A certified preloaded version of Ubuntu® 24.04 LTS is available from HP for this platform. Not all features are available in all editions or versions of Ubuntu. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS to take full advantage of Ubuntu functionality. Ubuntu may be automatically updated. The update setting is user controllable. ISP fees may apply, and additional requirements may apply over time for upgrades.

3. For detailed OS/hardware support information for Linux, see: [http://www.hp.com/support/linux\\_hardware\\_matrix](http://www.hp.com/support/linux_hardware_matrix)

**NOTE:** This product does not support Windows 10 A full list of HP products and the Windows 11 versions tested is available on the HP support website. <https://support.hp.com/us-en/document/c05195282>.



### Technical Specifications

#### PROCESSORS OVERVIEW

Name <sup>1,2,3,4,5</sup>	Cores	Clock Speed (GHz)	Intel® Turbo Boost Technology <sup>2</sup>	Cache (MB)	Max Memory Speed (MT/s)	Hyper-Threading	Featuring Intel® vPro™ Technology <sup>3</sup>	TDP
					1 DIMM Per Channel			
Intel® Xeon® 678X	48	2.4	4.9	192	6400	Yes	Yes	300
Intel® Xeon® 676X	32	2.8	4.9	144	6400	Yes	Yes	275
Intel® Xeon® 674X	28	3.0	4.9	144	6400	Yes	Yes	270
Intel® Xeon® 658X	24	3.0	4.9	144	6400	Yes	Yes	250
Intel® Xeon® 656	20	2.9	4.8	72	6400	Yes	Yes	210
Intel® Xeon® 654	18	3.1	4.8	72	6400	Yes	Yes	200
Intel® Xeon® 638	16	3.2	4.8	72	6400	Yes	Yes	180
Intel® Xeon® 636	12	3.5	4.8	48	6400	Yes	Yes	170
Intel® Xeon® 634	12	2.7	4.7	48	6400	Yes	Yes	150

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

3. Intel vPro® requires Windows 10 Pro 64 bit or higher, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or Wi-Fi 6E WLAN and TPM 2.0. Some functionality requires additional 3rd party software in order to run. Features of vPro® Essentials and Enterprise vary. See <http://intel.com/vpro>.

4. Processor speed denotes maximum performance mode.

5. Features and software that require a NPU may require software purchase, subscription or enablement by a software or platform provider, and third party software may have specific configuration or compatibility requirements. Performance varies by use, configuration, and other factors.

**Color** Black

**Convertibility** No

**Expansion Slots (see system board section for more details)**

- Slot 1: PCIe x16 Gen5
- Slot 2: PCIe x4 Gen5
- Slot 3: PCIe x16 Gen5
- Slot 4: PCIe x4 Gen4
- Slot 5: PCIe x16 Gen5

**Expansion Bays (see storage section for more details)**

- 1 internal 3.5" bay
- 1 external 5.25" bay



### Technical Specifications

<b>Front I/O</b>	Front I/O Premium: 2 SuperSpeed USB Type-C™ 20 Gbps signaling rate (USB Power Delivery 3.0), 2 SuperSpeed USB Type-A 5 Gbps signaling rate [left-most Type-A port has Charging Capability]  Front I/O Entry: 4 SuperSpeed USB Type-A 5 Gbps signaling rate [left-most Type-A port has Charging Capability]
<b>Internal I/O</b>	2 internal USB ports, 2 SATA ports, and 1 NVMe connector
<b>Rear I/O</b>	Universal Audio Jack with Retasking, 5x 5Gb SuperSpeed Type-A USB, 1x 10Gb SuperSpeed+ Type-C USB
<b>On-board RAID</b>	RAID 0 Striped Array
<b>Support</b>	RAID 1 Mirrored Array RAID 10 Striped/Mirrored RAID 5 Parity Array (See System Board Section for further details and configuration options)
<b>Chassis Dimensions (H x W x D)</b>	With Standard Side Panel: H: 17.2" [438.2mm] W: 6.9" [175.0mm] D: 18.5" [469.9mm]  With Max Side Panel: H: 17.2" [438.2mm] W: 8.3" [209.8mm] D: 18.5" [469.9mm]
<b>Packaged Dimensions</b>	EPE & Hybrid Packaging: H: 23.35" [593mm] W: 12.32" [313mm] D: 24.02" [610mm]  Max Side Panel EPE Packaging: H: 24.8" [629mm] W: 13.8" [351mm] D: 24.1" [612mm]
<b>Rack Dimensions</b>	4U (with Standard Side Panel) 5U (with Max Side Panel)



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### Technical Specifications

**Power Supply**

Choice of 2 Power Supplies:

- 775W, Platinum Rated (92% Efficient)
- 1350W @110V or 1700W @200V or higher, Platinum Rated (92% Efficient)

**Workstation ISV  
Certifications**

See the latest list of certifications at

[https://www.hp.com/us-en/workstations/isv-certifications/mcad-isv-certification.html?jumpid=va\\_6fsqyhva81](https://www.hp.com/us-en/workstations/isv-certifications/mcad-isv-certification.html?jumpid=va_6fsqyhva81)

**Chipset**

Intel® W890 Chipset

**Memory**

8 DIMM slots, supporting up to 64GB RDIMMs, DDR5 6400 MT/s speed at 1DPC (2DPC is 5200 MT/s)



### System Technical Specifications

#### PROCESSORS

	Factory Configured	Option Kit	Option Kit Part Number
Intel® Xeon® 678X	Y	N	
Intel® Xeon® 676X	Y	N	
Intel® Xeon® 674X	Y	N	
Intel® Xeon® 658X	Y	N	
Intel® Xeon® 656	Y	N	
Intel® Xeon® 654	Y	N	
Intel® Xeon® 638	Y	N	
Intel® Xeon® 636	Y	N	
Intel® Xeon® 634	Y	N	

#### SATA HARD DRIVES

4TB 7200RPM SATA 3.5in Enterprise HDD	Y	Y	K4T76AA
8TB 7200RPM SATA 3.5in Enterprise HDD	Y	Y	2Z273AA
12TB 7200 RPM SATA-6G 3.5in Enterprise HDD	Y	Y	5S461AA
HP Z4/Z6 A HDD Cable Kit	N	Y	74Y88AA
HP Optical Bay HDD Mounting Bracket-BLK	N	Y	NQ099AA

#### PCIe SOLID STATE DRIVES

HP Z Turbo 512GB PCIe-4x4 2280 TLC M.2 SSD	Y	N	
HP Z Turbo 512GB PCIe-4x4 2280 SED OPAL2 TLC M.2 SSD	Y	N	
512GB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD	Y	N	
Citadel 512GB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD	Y	N	
HP Z Turbo 1TB PCIe-4x4 2280 TLC M.2 SSD	Y	N	
HP Z Turbo 1TB PCIe-4x4 2280 SED OPAL2 TLC M. SSD	Y	N	
1TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD	Y	N	
Citadel 1TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M SSD	Y	N	



### System Technical Specifications

	Factory Configured	Option Kit	Option Kit Part Number
HP Z Turbo 1TB PCIe-5x4 2280 M.2 SSD	Y	Y	B54YVAA
HP Z Turbo 1TB PCIe-5x4 2280 SED OPAL2 M.2 SSD	Y	Y	B54YXAA
HP Z Turbo 2TB PCIe-4x4 2280 TLC M.2 SSD	Y		
HP Z Turbo 2TB PCIe-4x4 2280 SED OPAL2 TLC M.2 SSD	Y		
HP Z Turbo 2TB PCIe-5x4 2280 M.2 SSD	Y	Y	B54YWAA
HP Z Turbo 2TB PCIe-5x4 2280 SED OPAL2 M.2 SSD	Y	Y	B54YYAA
HP Z Turbo 4TB PCIe-4x4 2280 M.2 SSD	Y	N	
HP Z Turbo 4TB PCIe-4x4 2280 SED OPAL2 M.2 SSD	Y	N	
HP Z Turbo 4TB PCIe-5x4 2280 M.2 SSD	Y	Y	B54XBAA
HP Z Turbo 8TB PCIe-4x4 2280 NVMe M.2 SSD	Y	N	
HP Z Turbo 1TB 2280 PCIe-5x4 Self Encrypted OPAL2 TLC M.2 Z4/Z8 Fury Kit SSD - NEW AMO	N	Y	B54X7AA
HP Z Turbo 1TB 2280 PCIe-5x4 TLC M.2 Z4/Z8 Fury Kit SSD - NEW AMO	N	Y	B54X6AA
HP Z Turbo 2TB 2280 PCIe-5x4 Self Encrypted OPAL2 TLC M.2 Z4/Z8 Fury Kit SSD - NEW AMO	N	Y	B54X9AA
HP Z Turbo 2TB 2280 PCIe-5x4 TLC M.2 Z4/Z8 Fury Kit SSD - NEW AMO	N	Y	B54X8AA
HP Z Turbo 4TB 2280 PCIe-5x4 M.2 Z4/Z8 Fury Kit SSD - NEW AMO	N	Y	B54XCAA

#### HP Z Turbo Drive Quad Pro

HP Z Turbo Drive Quad Pro 1TB 2280 PCIe-5x4 NVMe TLC SSD	Y	N	
HP Z Turbo Drive Quad Pro 2TB 2280 PCIe-5x4 NVMe TLC SSD	Y	N	
HP Z Turbo Drive Quad Pro 4TB 2280 PCIe-5x4 NVMe TLC SSD	Y	N	

#### Intel® Virtual RAID on CPU (Intel® VROC) for NVMe

Intel VROC NVMe SSD Premium Controller Module	Y	Y	3FJ81AA
Intel VROC NVMe SSD Standard Controller Module	Y	Y	3FJ80AA

**NOTE:** Intel® VROC NVMe SSD Premium and Standard Controller Modules will be available Summer 2026.

**NOTE:** For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36GB of system disk (for Windows) is reserved for system recovery software.

**NOTE:** PCIe M.2 SSD Kit SKUs include a heatsink. PCIe M.2 SSD Module SKUs do not include a heatsink and are compatible with the HP Front Removable Carrier and the HP Z Turbo Quad Pro PCIe-5x16 NVMe Carrier.



### System Technical Specifications

#### GRAPHICS

Graphics Cable Adapters	Factory Configured	Option Kit	Option Kit Part Number	Supported # of cards
HP DP to HDMI 2.0	Y	Y	2JA63AA	
HP miniDP-to-DP Adapter	Y	Y	2MY05AA	
HP miniDP-to-DP Adapter (2-pack)	Y	N		
HP miniDP-to-DP Adapter (4-pack)	Y	N		
HP miniDP-to-DP Adapter (8-pack)	Y	N		
HP Mini DisplayPort to DisplayPort Adapter Cable Bulk 12)	N	Y	2KW87A6	
HP DisplayPort to VGA Adapter (Marlin)	N	Y	F7W97AA	
HP Graphics Cable Kit	N	Y	B5CJ4AA	
<b>Entry 3D</b>				
NVIDIA RTX A400 4 GB 4mDP Graphics	Y	Y	AV8J3AA	2
NVIDIA RTX A1000 8 GB 4mDP Graphics	Y	Y	AV8J4AA	2
<b>Mid-range 3D</b>				
NVIDIA RTX PRO 2000 Blackwell 16 GB 4mDP Graphics	Y	Y	B5CH7AA	2
NVIDIA RTX PRO 4000 Blackwell 24 GB 4DP Graphics	Y	Y	B11F3AA	
<b>High-End 3D</b>				
NVIDIA RTX PRO 4000 Blackwell 24 GB 4DP Graphics	Y	Y	B11F3AA	2
NVIDIA RTX PRO 4500 Blackwell 32 GB 4DP Graphics	Y	Y	B11F2AA	2
NVIDIA RTX PRO 5000 Blackwell 48 GB 4DP Graphics	Y	Y	B11F1AA	2
<b>Ultra High-End 3D</b>				
NVIDIA RTX PRO 6000 Blackwell Max-Q 300W 96 GB 4DP Graphics	Y	Y	B11E9AA	2
NVIDIA RTX PRO 6000 Blackwell 96 GB 4DP Graphics	Y	Y	B11F0AA	1
NVIDIA A800 40 GB Graphics	Y	Y	8D6C0AA	1



### System Technical Specifications

Other options	Factory Configured	Option Kit	Option Kit Part Number	Supported # of cards
NVIDIA Quadro Sync II Graphics	N	Y	1WT20AA	
NVIDIA RTX PRO Sync Card	N	Y	C08YVAA	
NVIDIA 3D Stereo Bracket - NEW AMO	N	Y	K0A25AA	

### MEMORY

	Factory Configured	Option Kit	Option Kit Part Number
16GB (1x16GB) DDR5 6400 DIMM ECC REG Memory	Y	Y	B55A9AA
32GB (1x32GB) DDR5 6400 DIMM ECC REG Memory	N	Y	B55B0AA
64GB (1x64GB) DDR5 6400 DIMM ECC REG Memory	N	Y	B55B1AA

**Note 1:** For details on the supported memory configurations on the HP Z8 Fury G6i Workstation, please refer to the System Technical Specifications - System Board section of this document.

**Note 2:** The CPUs determine the speed at which the memory is clocked. If a 6400 MHz capable CPU is used in the system, the maximum speed the memory will run at is 6400 MHz regardless of the specified speed of the memory. If the memory speed is rated lower than the CPU capability (ie - 5600 MHz) the whole system will run at this slower speed.

### OPTICAL AND REMOVAL STORAGE

	Factory Configured	Option Kit	Option Kit Part Number
HP PCIe - Gen5 Front Removable M.2/U.2 2-in-1 Frame/Carrier	Y	Y	B5CK8AA
512GB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 Front Load Removable SSD	Y	N	
Citadel 512GB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 Front Load Removable SSD	Y	N	
1TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 Front Load Removable SSD	Y	N	
Citadel 1TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 Front Load Removable SSD	Y	N	
2TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 Front Load Removable SSD	Y	N	
Citadel 2TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 Front Load Removable SSD	Y	N	
HP Z Turbo 1TB PCIe-4x4 2280 TLC U2M2 Front Load Removable SSD	Y	N	
HP Z Turbo 2TB PCIe-4x4 2280 TLC U2M2 Front Load Removable SSD	Y	N	



### System Technical Specifications

	Factory Configured	Option Kit	Option Kit Part Number
HP Z Turbo 4TB PCIe-4x4 2280 TLC U2M2 Front Load Removable SSD	Y	N	
HP Z Turbo 8TB PCIe-4x4 2280 NVMe M.2 Front Load Removable SSD	Y	N	
HP Z Turbo 1TB PCIe-5x4 2280 TLC M.2 Front Load Removable SSD	Y	N	
HP Z Turbo 2TB PCIe-5x4 2280 TLC M.2 Front Load Removable SSD	Y	N	
HP Z Turbo 4TB PCIe-5x4 2280 TLC M.2 Front Load Removable SSD	Y	N	
9.5mm DVD-ROM 1st ODD	Y	Y	K3R63AA
9.5mm DVD-Writer 1st ODD	Y	Y	K3R64AA
HP PCIe - Gen5 Front Removable M.2/U.2 Spare Carrier - (AMO)		Y	B54ZMAA
HP Z Turbo Drive Quad Pro PCIe-5x16 NVMe Carrier - (AMO)		Y	B54Z1AA

**Note:** Option Kits for Front Accessible are listed in SSD AMO as Modules. Front Removable supports all of them.



### System Technical Specifications

#### NETWORKING AND COMMUNICATIONS

	Factory Configured	Option Kit	Option Kit Part Number
AT-2914SX/LC PCIe Fiber Adapter	Y	Y	1C7Q2AA
Allied Telesis AT-2911Ta/2-901 Dual Port 1GbE NIC <sup>1</sup>	Y	Y	6E3Y9AA
Broadcom 5720 1GbE RJ45 PCIe Ethernet Network Adapter	Y	Y	9Z7P1AA
Intel I226-T1 2.5GbE Ethernet Network Adapter <sup>1</sup>	Y	Y	9P1U8AA
Intel X550-T2 10GbE Dual Port NIC	Y	Y	1QL46AA
HP Dual Port 10GBase-T NIC Module G2	Y	Y	360K6AA
HP 10/25GbE SFP28 Fiber Network Module	Y	Y	B5CL0AA
NVIDIA Mellanox ConnectX-6 DX Dual Port 10/25GbE SFP28 NIC <sup>1</sup>	Y	Y	436M8AA
Intel E810-CQDA2 1x100GbE/2x50GbE QSFP28 PCIe Network Adapter <sup>1</sup>	Y	Y	D0SX1AA
HP MT7925 Wi-Fi 7 +Bluetooth 5.4 WLAN with External Antenna	Y	Y	B5CL1AA
HP FlexIO MT7925 Wi-Fi 7 + Bluetooth 5.4 WLAN with Internal Antenna	Y	N	
HP 10GbE SFP+ SR/SW LC Fiber Optic Transceiver	Y	Y	860T8AA
HP 25GbE SFP28 LC Fiber Optic Transceiver	Y	Y	860T9AA
Intel i350-T4 Quad Port 1Gb NIC	N	Y	W8X25AA

1. Available Summer 2026.

#### REMOTE SYSTEM CONTROLLER

HP Integrated Remote System Controller	Y	Y	7K6D9AA
HP Remote System Controller	Y	Y	7K6D7AA
HP Remote System Controller Main Board Adapter	Y	Y	7K6D8AA



### System Technical Specifications

#### RACKING AND PHYSICAL SECURITY

	Factory Configured	Option Kit	Option Kit Part Number
HP Z4/Z8 Fury G6i Rail Rack Kit	N	Y	B5CJ0AA
HP Smart Cover Enable Safety Interlock and Cover Removal Sensor	Y	N	
HP Keyed Cable Lock		Y	T1A62AA
HP Master Keyed Standard Cable Lock		Y	T1A63AA

#### INPUT DEVICES

	Factory Configured	Option Kit	Option Kit Part Number
HP Black 125 Wired Mouse	Y	Y	265A9AT
HP Wired 128 LSR Mouse	Y	Y	265D9AA
HP Wired 320M Mouse	Y	Y	9VA80AA
HP 125 v2 Black Wired Keyboard	Y	Y	AY2Y7AA
HP 320K v2 Keyboard	Y	Y	9SR37UT
HP 725 Multi-Device Rechargeable Wireless Keyboard and Mouse Combo	Y	Y	9T5B2AA
HP Bus Slim v2 Smart Card Wired Keyboard	Y	Y	A71J9AA
HP 125 G2 Wired USB Keyboard (Bulk 12)	N	Y	AY2Y7A6
HP 320K G2 Wired USB Keyboard (Bulk 12)	N	Y	9SR37A9
HP 435 Programmable BT Keypad	N	Y	7N7C3AA
HP 485 Comfort Wired Keyboard	N	Y	8T6M2AA
HP 685 Comfort Dual-Mode Keyboard	N	Y	8T6L9UT



### System Technical Specifications

	Factory Configured	Option Kit	Option Kit Part Number
HP 655 Wireless Keyboard and Mouse Combo G2 (Blk 9)	N	Y	4R009A9
HP 655 Wireless Keyboard and Mouse Combo G2	N	Y	4R009UT
HP 685 Comfort Dual-Mode Keyboard and Mouse Combo	N	Y	8T6L7UT
HP Wired Desktop 320MK Mouse and Keyboard G2	N	Y	9SR36UT
HP 920 Ergonomic Vertical Bluetooth 5.0 + Wireless 2.4GHz Wireless Mouse	N	Y	6H1A4AA
HP Creator USB-A+Bluetooth® 935 Wireless Mouse Black	N	Y	1D0K8AA

### FLEX MODULE (Rear IO)

	Factory Configured	Option Kit	Option Kit Part Number
HP 1GbE LAN Flex Port 2020	Y	Y	141J6AA
HP Flex 1GbE Fiber LC Single Port	Y	Y	20J15AA
HP Serial Port v3 Flex IO	Y	Y	5B895AA
HP 10GBase-T Flex IO v2	Y	Y	CF8G5AA
HP 2.5GbE LAN Flex Port	Y	Y	169K0AA
Dual Type-A 3.2 Gen 1 Flex IO v2	Y	Y	141J8AA
Dual Type-C 3.2 Gen2 15W Out Flex IO	Y	Y	B6BT5AA

### OTHER HARDWARE

	Factory Configured	Option Kit	Option Kit Part Number
HP Serial Port Internal Adapter	Y	Y	B5CH9AA
HP Z4 G6i Max Side Panel	Y	Y	BY2F7AA
HP Z4 G6i Fan and Front Card Guide Kit	Y	Y	BZ2R2AA
HP Dual TBT5 PCIe x4 Low Profile Card	Y	Y	B15HRAA
HP USB Type-A 2.0 Internal Prt Adpt Kt	Y	Y	79C24AA
HP SD Card Reader	Y	N	
Type-A SuperSpeed USB 5Gbps Front IO v2 Entry Module	Y	N	
Type-C SuperSpeed USB 20Gbps Front IO v2 Premium Module	Y	Y	B5CJ1AA



### System Technical Specifications

	<b>Factory Configured</b>	<b>Option Kit</b>	<b>Option Kit Part Number</b>
C13-C14 2.0m 10A 200-240V Countries Straight Rack Power Cord	Y	Y	#N/A
C13-C14 2.0m 15A 100-127V Countries Straight Rack Power Cord	Y	Y	8R881AA
C13 1.83m Power Cord Kit - NEW AMO	N	Y	6Z1T9AA
HP Z4 G6i Fan and Front Card Guide Extra Long Graphics - NEW AMO	N	Y	CM3R7AA
HP Z4 G6i Memory Cooling Solution - NEW AMO	N	Y	BZ2R1AA
Side Panel Barrel Keylock	Y	N	



### System Technical Specifications

#### SOFTWARE

	Factory Configured	Option Kit
HP PC Hardware Diagnostics UEFI (Windows OS only) <sup>1</sup>	Y	N
HP PC Hardware Diagnostics Windows <sup>1</sup>	Y	N
HP Wolf Security <sup>1,2</sup>	Y	N
HP Notifications <sup>1</sup>	Y	N
HP Desktop Support Utility <sup>1</sup>	Y	N
HP Documentation <sup>1</sup>	Y	N
myHP <sup>1</sup>	Y	N
Kingsoft WPS Office <sup>1,3</sup>	Y	N
Z by HP Data Science Stack Manager <sup>4</sup>	Y	N
HP Image Assistant <sup>1</sup>	N	N
HP Support Assistant <sup>1</sup>	N	N
HP IQ <sup>5</sup>		

1. Windows OS only.

2. Not available in Russia.

3. Only available in China.

4. Optional software.

5. HP IQ delivery app is preloaded on select HP PCs; it will be automatically updated to the future featured HP IQ application if you have auto updates enabled in Windows or will be available for download from the Microsoft Store. The future featured HP IQ app uses artificial intelligence.

Features vary by configuration. For complete details see [https://support.hp.com/us-en/document/ish\\_13696672-13696717-16](https://support.hp.com/us-en/document/ish_13696672-13696717-16).



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### *System Technical Specifications*

#### **OPERATING SYSTEMS**

Windows 11 Pro for Workstations<sup>1</sup>

Ubuntu 24.04 LTS<sup>2</sup>

Linux<sup>®</sup>-ready<sup>3</sup>

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 11 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. A certified preloaded version of Ubuntu<sup>®</sup> 24.04 LTS is available from HP for this platform. Not all features are available in all editions or versions of Ubuntu. Systems may require upgraded and/or separately purchased hardware, drivers, software or BIOS to take full advantage of Ubuntu functionality. Ubuntu may be automatically updated. The update setting is user controllable. ISP fees may apply, and additional requirements may apply over time for upgrades.
3. For detailed OS/hardware support information for Linux, see: [http://www.hp.com/support/linux\\_hardware\\_matrix](http://www.hp.com/support/linux_hardware_matrix)



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### *System Technical Specifications*

#### **BIOS**

Key features of the HP BIOS include:

- Deployment and manageability - HP BIOS provides several technologies that help integrate the Z4 G6i into the enterprise, such as PXE, remote recovery, remote configuration, remote control, and BIOS (F10) Setup support for 15 languages.
- Network firmware updates - Update your BIOS via the cloud or standardize on a BIOS version hosted on an Enterprise network.
- Stability - HP BIOS supports the HP stable product roadmap by releasing only critical BIOS changes to the factory and advanced change notification.
- Class 3 UEFI specification version 2.9
- Absolute Persistence agent - For tracking and tracing services, available in select countries, separate software and purchase of a subscription is required.
- Thermal and power management - The HP BIOS provides and enables thermal and power management technologies so component temperatures are managed for high reliability and to assist in operating the HP Workstation computer in any enterprise environment.
- Acoustic performance - Industry leading acoustic emissions across the range of operating conditions.
- Serviceability - HP BIOS provides diagnostic and detailed service information.
- Upgrades and recovery - HP BIOS provides numerous ways to upgrade HP Workstation computers, including BIOS updates from within Windows (HP Firmware Update and Recovery), Capsule update, HP Client Manager, and fail-safe recovery. In addition, the HP BIOS Configuration Utility enables replication of BIOS settings within Windows while the Replicated Setup feature provides the same capability within BIOS (F10) Setup. The BIOS Configuration Utility is available from the HP support website.
- HP BIOS uses PKI signing of the BIOS for trusted BIOS upgrades and recovery.

Additional HP BIOS Features:

- Power-On password - Helps prevent an unauthorized user from powering on the system.
- Administrator password - Also known as the BIOS Setup password, this helps prevent unauthorized changes to the system configuration. If the administrator password is not known, the BIOS cannot be updated and changes cannot be made to BIOS settings using BIOS Setup or under the OS.



### *System Technical Specifications*

- S4/S5 Maximum Power Savings setting supports EU Lot6 requirement and allows the computer to power down below 0.5W in S4/S5 (when turned off). When S4/S5 Maximum Power Savings feature is enabled below features are turned off:
  - Power to expansion connectors / slots
  - Most Wake events other than power buttons and WOL (Wake on LAN supported by embedded Lan controller under S4/S5 Maximum Power Saving Enabled)
  - USB charging ports
- Sure Start Gen 8
  - BIOS Integrity checking – Sure Start protection ensures that only trusted BIOS code is executed and not rootkits, viruses and malware. Verification is done upon boot up, shutdown and while the system is on
  - Start is set by default to automatically repair the BIOS if corrupted or compromised but is policy driven for better manageability
  - Protecting beyond BIOS – Integrity checking and repair is extended to other data that should be protected such as network configuration parameters, platform specific information (i.e. system IDs), secure boot credentials, and other code the system needs to boot.
  - Audit enabled – System Audit via Sure Start Event Logs capture data such as incident, repair date and time for troubleshooting and investigating.

### **SOFTWARE COMPONENTS AND APPLICATIONS WITH WINDOWS**

#### **BIOS**

Absolute Persistence Module<sup>1</sup>  
BIOS Update via Network  
Ultimate Performance Mode  
HP BIOSphere Gen4<sup>2</sup>  
HP DriveLock & Automatic DriveLock  
Power On Authentication  
Secure Erase<sup>3</sup>

#### **Application Software**

Data Science Stack  
HP Z Remote Graphics Software (RGS)  
HP Anyware Documentation and Trial  
HP PC Hardware Diagnostics UEFI  
HP PC Hardware Diagnostics Windows



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### *System Technical Specifications*

HP Privacy Settings  
myHP

#### **Manageability Software and Features**

HP BIOS Config Utility (BCU)  
HP Client Catalog  
HP Driver Packs<sup>4</sup>  
HP Image Assistant  
HP Manageability Integration Kit Gen6<sup>5</sup>  
HP System Software Manager (SSM)

#### **Security Software and Management**

Firmware Health and Insights  
HP Client Security Manager Gen7<sup>6</sup>  
HP Platform Certificate  
HP Pro Wolf Security (Including Credential Manager)  
HP Security Update Service (SUS)  
HP Smart Cover Enable Safety Interlock and Cover Removal Sensor  
HP Sure Recover<sup>7</sup>  
HP Sure Run<sup>8</sup>  
HP Sure Start Gen8<sup>9</sup>  
HP Wolf Security (Including HP Sure Click<sup>10</sup> & HP Sure Sense<sup>11</sup>)<sup>12</sup>  
Physical Presence Rollback  
Power-on password (viaBIOS)  
RAID configurations<sup>13</sup>  
SATA port disablement (viaBIOS)  
Serial, USB enable/disable (viaBIOS)  
Setup password (viaBIOS)  
TPM 2.0 Embedded Security Chip (Common Criteria EAL4+ Certified)<sup>14</sup>

#### **Setup and Support**

HP Desktop Support Utility  
HP Notifications  
HP Support Assistant<sup>15</sup>



### System Technical Specifications

1. 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. 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.
2. HP BIOSphere features may vary depending on the platform and configurations.
3. HP Secure Erase - or 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.
4. HP Driver Packs not preinstalled, however available for download at <http://www.hp.com/go/clientmanagement>.
5. HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
6. HP Client Security Manager requires Windows and is available on the select HP PCs.
7. HP Sure Recover is available on select HP PCs and requires Windows 11 and an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data. Network based recovery using Wi-Fi is only available on PCs with Intel Wi-Fi Module.
8. HP Sure Run is available on select Windows 11 based HP Pro, Elite and Workstation PCs with select Intel® or AMD processors
9. HP Sure Start is available on select HP PCs and workstations. See product specifications for availability.
10. 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.
11. 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.
12. HP Wolf Pro Security Edition is available preloaded on select SKUs, and depending on the HP product purchased, includes a license with a term length communicated to you at purchase and in your order confirmation email. The HP Wolf Pro Security Edition software is licensed under the license terms of the HP Wolf Security Software - End-User license Agreement (EULA) that can be found at: [https://support.hp.com/us-en/document/ish\\_3875769-3873014-16](https://support.hp.com/us-en/document/ish_3875769-3873014-16) as that EULA is modified by the following: 7. Term. Unless otherwise terminated earlier pursuant to the terms contained in this EULA, the license for the HP Wolf Pro Security Edition is effective upon 4 months after the date the HP Product was shipped by HP and will continue for the term communicated to you at purchase and in your order confirmation email ("Initial Term"). At the end of the Initial Term you may either (a) purchase a renewal license for the HP Wolf Pro Security Edition from HP.com, HP Sales or an HP Channel Partner, or (b) continue using the standard versions of HP Sure Click and HP Sure Sense at no additional cost with no future software updates or HP Support. Notwithstanding the foregoing, the license shall expire no later than one year after the fixed term of the subject license ends.
13. RAID configuration is optional and does require a second hard drive.
14. Firmware TPM is version 7.2.4.1. Hardware TPM is v2.0.
15. HP Support Assistant requires Windows and Internet access.



### System Technical Specifications

#### SYSTEM BOARD

<b>System Board Form Factor</b>	H: 12.54" [318.39mm] W: 11.54" [293.36mm]
<b>Processor Socket</b>	Intel LGA-4710
<b>CPU Bus Speed</b>	DMI Gen4 x 8 lanes
<b>Chipset</b>	Intel W890 Arrow Lake- WS PCH
<b>Super I/O Controller</b>	Nuvoton SIO24
<b>Memory Expansion Slots</b>	8 DDR5 RDIMM memory slots
<b>Memory Type Supported</b>	DDR5, RDIMM (Registered) ECC
<b>Memory Modes Supported</b>	Non-Interleaving for single channel. Interleaving when multiple channels are populated
<b>Memory Speed Supported</b>	6400MT/s for 1DPC and 5200MT/s for 2DPC; DDR5
<b>Memory Protection</b>	ECC on data
<b>Maximum Memory</b>	512GB
<b>Memory Configuration</b>	16GB, 32GB and 64GB RDIMMs are supported. 16GB and 32GB RDIMMs can be mixed in a system. (Supported)
<b>PCI Express Connectors</b>	<ul style="list-style-type: none"><li>• 3 PCI Express Gen5 slot x16 mechanical/ x16 electrical, CPU slot (full height, full length)</li><li>• 1 PCI Express Gen5 slot x4 mechanical/ x4 electrical, CPU slot (full height, half length)</li><li>• 1 PCI Express Gen4 slot x4 mechanical/ x4 electrical, PCH slot (full height, half length)</li><li>• 4 M.2 Slots (PCIe Gen5 x4)</li><li>• 1 Front NVMe Storage (MCIO PCIe Gen5 x8)</li><li>• 1 Flex I/O (PCIe Gen3 x2)</li><li>• 1 Network Header (SlimSAS PCIe Gen4 x4)</li></ul>



### System Technical Specifications

#### Supported Interfaces

##### Integrated RAID

		<b>RAID 0</b>	<b>RAID 1</b>	<b>RAID 5</b>	<b>RAID 10</b>
Standard Factory Configuration	NVMe	On-Board Boot (Max 2)	On-Board Boot	-	-
	SATA	-	-	-	-
Supported Operating Systems: Windows 11					
Factory Services	NVME	Boot & Data All Supported Locations	Boot & Data All Supported Locations	Boot & Data All Supported Locations	Boot & Data All Supported Locations
	SATA	Boot & Data All Supported Locations	Boot & Data All Supported Locations		
Supported Operating Systems: Windows 11, RHEL 8.6 and later, SLE 15 SP4 and later, and Ubuntu 20.04 or later					

**Note:** HP only supports VROC (Intel) RAID configurations for Standard Factory configurations. Factory Services may be able to provide other RAID configurations.

Note: Intel VROC RAID configurations available summer 2026.

<b>SATA</b>	Number of SATA ports: 2 Intel® SATA controller: primary SATA
<b>Integrated Graphics</b>	No
<b>Network Controller</b>	WGI219LM LOM provides Management capabilities: WOL, PXE 2.1, DASH 1.2 and AMT
<b>External SATA (eSATA)</b>	No
<b>IDE connector</b>	No
<b>Floppy connector</b>	No
<b>Serial</b>	1 internal header (requires optional Serial Port Adapter Kit)
<b>2<sup>nd</sup> Serial</b>	No
<b>HD Integrated Audio</b>	Yes



### System Technical Specifications

<b>USB Connector(s)</b>	<b>Front</b>	<p>Front I/O Entry: Four 5Gbps USB-A ports (Left-most Port has Charging Capability)</p> <p>Front I/O Premium: Two 5Gbps (Left-most Port has Charging Capability) Two 20Gbps Type-C™ (Ports have PD3.0 Capability)</p> <ul style="list-style-type: none"> <li>•Charging Ports provide 1.5 Amps @ 5 Volts</li> <li>• Standard USB Type A Ports provide 900mA @ 5 Volts</li> <li>• USB Type C Ports provide 3 Amps @ 5 Volts</li> </ul>
	<b>Rear</b>	Five 5Gbps Type-A ports and one 10Gbps Type-C port. And Two 5Gbps Type-A ports (Optional via Flex module) or Two 10Gbps Type-C port (Optional via Flex module).
	<b>Internal</b>	<p>One 5Gbps USB header, with a single 12-pin shrouded connector. This header supports a USB Media Card reader.</p> <p>One USB2.0 single port header.</p>
<b>HD Integrated Audio</b>	Yes	
<b>Flash ROM</b>	Yes	
<b>CPU Fan Header</b>	Yes	
<b>Memory Fan Header</b>	Yes (dual header)	
<b>Chassis Fan Header</b>	2 front, one rear	
<b>Front PCI Fan Header</b>	Yes	
<b>Front Control</b>	Yes	
<b>Panel/Speaker Header</b>		
<b>CMOS Battery Holder - Lithium</b>	Yes	
<b>Integrated Trusted Platform Module</b>	Integrated TPM 2.0.	
<b>Power Supply Headers</b>	The TPM module is disabled where restricted by law.	
	Yes	



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### *System Technical Specifications*

<b>Power Switch, Power LED &amp; Hard Drive LED Header</b>	Yes
<b>Clear Password Jumper</b>	Yes
<b>Keyboard/Mouse</b>	USB Only
<b>Power Supply</b>	1350W @110V or 1700W @200V or higher 775W



### System Technical Specifications

#### SYSTEM CONFIGURATIONS

<b>HP Z4 G6i Configuration #1</b>	
<b>Processor Info</b>	Intel Xeon 634 4.60G 48 MB 12 cores 150W CPU
<b>Memory Info</b>	16GB (1x16GB) DDR5 6400 DIMM ECC REG Memory
<b>Graphics Info</b>	1x NVIDIA RTX A400 4 GB 4mDP Graphics
<b>Disks/Optical/Floppy</b>	1x 4TB Internal M.2 SSD + 1x DVDRW SATA
<b>PSU</b>	775W EPA92 Power Supply
<b>Other</b>	

<b>Energy Consumption (Watts)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows long Idle (S0)	69.17		69.2		68.8	
Windows short Idle (S0)	76.21		77.9		76.5	
Windows Busy Typ (S0)	192.05		193.1		193.6	
Windows Busy Max (S0)	212.9		213.4		212.4	
Sleep (S3)	6.74	6.64	6.78	6.74	6.64	6.78
Off (S5)	3.8	3.72	3.88	3.8	3.72	3.88
Zero Power Mode (EuP)	0.23		0.24		0.23	

<b>Heat Dissipation (Btu/hr)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows Idle (S0)	260.04		265.81		261.03	
Windows short Idle (S0)	236.02		236.12		234.76	
Windows Busy Typ (S0)	655.30		658.88		660.59	
Windows Busy Max (S0)	726.44		728.15		724.74	
Sleep (S3)	23.00	22.66	23.13	23.00	22.66	23.13
Off (S5)	12.97	12.69	13.24	12.97	12.69	13.24
Zero Power Mode (EuP)	0.78		0.82		0.78	



### System Technical Specifications

<b>HP Z4 G6i Configuration #2</b>	
<b>Processor Info</b>	Intel Xeon 654 4.80G 72 MB 18 cores 200W CPU
<b>Memory Info</b>	64GB (4x16GB) DDR5 6400 DIMM ECC REG Memory
<b>Graphics Info</b>	1x NVIDIA RTX PRO 2000 Blackwell 16 GB 4mDP Graphics
<b>Disks/Optical/Floppy</b>	1x 4TB Internal SATA HDD + 2x 4TB Internal M.2 SSD + 1x DVDRW SATA
<b>PSU</b>	775W EPA92 Power Supply
<b>Other</b>	

<b>Energy Consumption (Watts)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows long Idle (S0)	78.32		79.21		79.34	
Windows short Idle (S0)	89.14		87.2		87.6	
Windows Busy Typ (S0)	298.6		297.6		298.5	
Windows Busy Max (S0)	322.1		321.8		322.3	
Sleep (S3)	7.91	7.82	7.9	7.91	7.82	7.9
Off (S5)	3.73	3.64	3.78	3.73	3.64	3.78
Zero Power Mode (EuP)	0.227		0.236		0.228	

<b>Heat Dissipation (Btu/hr)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows Idle (S0)	267.24		270.28		270.72	
Windows short Idle (S0)	304.16		297.54		298.90	
Windows Busy Typ (S0)	1018.87		1015.45		1018.52	
Windows Busy Max (S0)	1099.05		1098.03		1099.73	
Sleep (S3)	26.99	26.68	26.96	26.99	26.68	26.96
Off (S5)	12.73	12.42	12.90	12.73	12.42	12.90
Zero Power Mode (EuP)	0.77		0.81		0.78	



### System Technical Specifications

<b>HP Z4 G6i Configuration #3</b>	
<b>Processor Info</b>	Intel Xeon 658X 4.90G 144 MB 24 cores 250W CPU
<b>Memory Info</b>	128GB (4x32GB) DDR5 6400 DIMM ECC REG Memory
<b>Graphics Info</b>	1x NVIDIA RTX PRO 4000 Blackwell 24 GB 4DP Graphics
<b>Disks/Optical/Floppy</b>	1x 8TB Internal SATA HDD + 2x 8TB Internal M.2 SSD + 1x DVDRW SATA
<b>PSU</b>	1200/1350W EPA92 Power Supply
<b>Other</b>	

<b>Energy Consumption (Watts)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows long Idle (S0)	149.14		148.63		149.25	
Windows short Idle (S0)	159.93		159.83		159.98	
Windows Busy Typ (S0)	452.4		453.8		452.6	
Windows Busy Max (S0)	490.2		492.6		490.8	
Sleep (S3)	8.01	7.9	8.02	8.01	7.9	8.02
Off (S5)	3.69	3.57	3.72	3.69	3.57	3.72
Zero Power Mode (EuP)	0.226		0.228		0.226	

<b>Heat Dissipation (Btu/hr)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows Idle (S0)	508.89		507.15		509.26	
Windows short Idle (S0)	545.70		545.36		545.87	
Windows Busy Typ (S0)	1543.65		1548.43		1544.33	
Windows Busy Max (S0)	1672.63		1680.82		1674.68	
Sleep (S3)	27.33	26.96	27.37	27.33	26.96	27.37
Off (S5)	12.59	12.18	12.69	12.59	12.18	12.69
Zero Power Mode (EuP)	0.77		0.78		0.77	



### System Technical Specifications

<b>HP Z4 G6i Configuration #4</b>	
<b>Processor Info</b>	Intel Xeon 676X 4.90G 144 MB 32 cores 275W CPU
<b>Memory Info</b>	256GB (4x64GB) DDR5 6400 DIMM ECC REG Memory
<b>Graphics Info</b>	1x NVIDIA RTX PRO 6000 Blackwell Max-Q 300W 96 GB 4DP Graphics
<b>Disks/Optical/Floppy</b>	1x 12TB Internal SATA HDD + 4x 8TB Internal M.2 SSD + 1x DVDRW SATA
<b>PSU</b>	1200/1350W EPA92 Power Supply
<b>Other</b>	

<b>Energy Consumption (Watts)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows long Idle (S0)	126.5		125.3		127.1	
Windows short Idle (S0)	140.5		141.2		142.1	
Windows Busy Typ (S0)	513.1		511.6		512.6	
Windows Busy Max (S0)	572.9		573.1		572.6	
Sleep (S3)	8.76	8.53	8.75	8.76	8.53	8.75
Off (S5)	3.52	3.46	3.54	3.52	3.46	3.54
Zero Power Mode (EuP)	0.25		0.26		0.25	

<b>Heat Dissipation (Btu/hr)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows Idle (S0)	431.64		427.54		433.68	
Windows short Idle (S0)	479.41		481.79		484.87	
Windows Busy Typ (S0)	1750.77		1745.64		1749.06	
Windows Busy Max (S0)	1954.82		1955.50		1953.79	
Sleep (S3)	29.89	29.11	29.86	29.89	29.11	29.86
Off (S5)	12.01	11.81	12.08	12.01	11.81	12.08
Zero Power Mode (EuP)	0.85		0.89		0.85	



### System Technical Specifications

<b>HP Z4 G6i Configuration #5</b>	
<b>Processor Info</b>	Intel Xeon 678X 4.90G 192 MB 48 cores 300W CPU
<b>Memory Info</b>	512GB (8x64GB) DDR5 6400 DIMM ECC REG Memory
<b>Graphics Info</b>	1x NVIDIA RTX PRO 6000 Blackwell 96 GB 4DP Graphics
<b>Disks/Optical/Floppy</b>	4x 8TB Internal M.2 SSD + 2x 8TB Front Accessible M.2
<b>PSU</b>	1200/1350W EPA92 Power Supply

<b>Energy Consumption (Watts)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows long Idle (S0)	148.81		147.76		147.6	
Windows short Idle (S0)	158.5		157.9		158.4	
Windows Busy Typ (S0)	973.5		978.4		973.6	
Windows Busy Max (S0)	1027.3		1026.5		1029.6	
Sleep (S3)	10.6	9.9	10.5	10.6	9.9	10.5
Off (S5)	3.81	3.61	3.84	3.81	3.61	3.84
Zero Power Mode (EuP)	0.25		0.26		0.25	

<b>Heat Dissipation (Btu/hr)</b>						
	115 VAC		230 VAC		100 VAC	
	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled	LAN Enabled	LAN Disabled
Windows Idle (S0)	507.76		504.18		503.63	
Windows short Idle (S0)	540.82		538.78		540.48	
Windows Busy Typ (S0)	3321.72		3338.44		3322.06	
Windows Busy Max (S0)	3505.29		3502.56		3513.14	
Sleep (S3)	36.17	33.78	35.83	36.17	33.78	35.83
Off (S5)	13.00	12.32	13.10	13.00	12.32	13.10
Zero Power Mode (EuP)	0.85		0.89		0.85	

**NOTE:** The Power Supply Efficiency report may be found at the following links:  
<https://www.plugloadsolutions.com/80PlusPowerSuppliesDetail.aspx?id=0&type=2>



### System Technical Specifications

#### POWER SUPPLY

<b>Operating Voltage Range</b>	90-269VAC
<b>Rated Voltage Range</b>	100-240VAC
<b>Rated Line Frequency</b>	50-60 Hz
<b>Frequency Range</b>	47-66Hz
<b>Heat Dissipation</b>	Typical: 444 btu/hr (112 kcal/hr) Maximum: 1484 btu/hr (374 kcal/hr)
<b>ENERGY STAR® certified</b> (Config Dependent)	Yes
<b>CECP Compliant @ 220V</b>	YES
<b>FEMP Standby Power Compliant</b>	Yes, with Wake-on-LAN disabled: <1W in S5 - Power Off
<b>Built-in Self Test (BIST) LED</b>	Yes
<b>Surge Tolerant Full Ranging Power Supply</b> (withstands power surges up to 2000V)	Yes
<b>Hood Lock Header</b>	Yes
<b>ErP Lot 6- Tier 1 Compliance @ 230V</b> (<1W in S5 - -Power Off)	Yes
<b>ErP Lot 6- Tier 2 Compliance @ 230V</b> (<0.5W in S5 - Power Off)	Yes

#### Declared Noise Emissions (Entry-level, Mid-level, and High-end configurations; tested on floor)

<b>System Configuration</b> (Entry-level)	<b>Processor Info</b>	Intel Xeon 634 4.60G 48 MB 12 cores 150W CPU
	<b>Memory Info</b>	16GB (1x16GB) DDR5 6400 DIMM ECC REG Memory
	<b>Graphics Info</b>	1x NVIDIA RTX A400 4 GB 4mDP Graphics
	<b>Disks/Optical</b>	1x 4TB Internal M.2 SSD + 1x DVDRW SATA
	<b>Power Supply</b>	775W EPA92 Power Supply

Declared Noise Emissions	Sound Power (LWAd, bels)		Deskside Sound Pressure (LpAm, decibels)
	Idle	Operating	
Idle	4.1		25
Hard drive Operating (Drive Random Seek)			
Hard drive Operating (Active mode)	4.1		25



# QuickSpecs

## HP Z4 G6i Workstation Desktop PC

### System Technical Specifications

<b>System Configuration</b> (Mid-end)	<b>Processor Info</b>	Intel Xeon 658X 4.90G 144 MB 24 cores 250W CPU
	<b>Memory Info</b>	128GB (4x32GB) DDR5 6400 DIMM ECC REG Memory
	<b>Graphics Info</b>	1x NVIDIA RTX PRO 4000 Blackwell 24 GB 4DP Graphics
	<b>Disks/Optical</b>	1x 8TB Internal SATA HDD + 2x 8TB Internal M.2 SSD + 1x DVDRW SATA
	<b>Power Supply</b>	1200/1350W EPA92 Power Supply

Declared Noise Emissions		Sound Power (LWAd, bels)	Deskside Sound Pressure (LpAm, decibels)
	Idle		4.1
Hard drive Operating (Drive Random Seek)		4.2	25
Hard drive Operating (Active mode)		4.2	25

<b>System Configuration</b> (High-end)	<b>Processor Info</b>	Intel Xeon 678X 4.90G 192 MB 48 cores 300W CPU
	<b>Memory Info</b>	512GB (8x64GB) DDR5 6400 DIMM ECC REG Memory
	<b>Graphics Info</b>	1x NVIDIA RTX PRO 6000 Blackwell 96 GB 4DP Graphics
	<b>Disks/Optical</b>	4x 8TB Internal M.2 SSD + 2x 8TB Front Accessible M.2
	<b>Power Supply</b>	1200/1350W EPA92 Power Supply

Declared Noise Emissions		Sound Power (LWAd, bels)	Deskside Sound Pressure (LpAm, decibels)
	Idle		4.2
Hard drive Operating (Drive Random Seek)			
Hard drive Operating (Active mode)		4.2	27



### System Technical Specifications

<b>Environmental Requirements</b>	<b>Temperature</b>	<p>Operating: 5° to 40°C (40° to 104°F)<sup>1</sup></p> <p>Non-operating: -40° to 60°C (-40° to 140°F)</p> <p>Above 1524 m (5,000 feet) altitude, the maximum operating temperature is reduced by 1° C (1.8° F) for every 305 m (1,000 feet) increase in elevation.</p> <p>Maximum rate of change: 10 °C/hr</p> <p>No direct sustained sunlight</p>
	<b>Humidity</b>	<p>Operating: 8% to 85% RH, non-condensing</p> <p>Non-operating: 8% to 90% RH, non-condensing</p>
	<b>Maximum Altitude</b>	<p>Operating (with Rotational Hard Drives): 3,048 m (10,000 feet)</p> <p>Operating (with only Solid-State Drives): 5,000 m (16,404 feet)</p> <p>Non-operating: 12,192 m (40,000 feet)</p> <p>Above 1524 m (5,000 feet) altitude, the maximum operating temperature is reduced by 1° C (1.8° F) for every 305 m (1,000 feet) increase in elevation.</p>
	<b>Dynamic</b>	<p>Shock</p> <p>Operating: ½-sine: 40g, 2-3ms (~62 cm/sec)</p> <p>Non-operating: ½-sine: 160 cm/s, 2-3ms (~105g)*</p> <p>square: 422 cm/s, 20g</p> <p>*PCIe devices mass &lt;1.3kg</p> <p>NOTE: Values represent individual shock events and do not indicate repetitive shock events</p> <p>Vibration</p> <p>Operating random: 0.5g (rms), 5-300 Hz, up to 0.0025g<sup>2</sup>/Hz</p> <p>Non-operating random: 2.0g (rms), 5-500 Hz, up to 0.0150 g<sup>2</sup>/Hz</p> <p>NOTE: Values do not indicate continuous vibration.</p>



### System Technical Specifications

	<b>Dynamic</b>	<p>Shock</p> <p>Operating: ½-sine: 40g, 2-3ms (~62 cm/sec) Non-operating: ½-sine: 160 cm/s, 2-3ms (~105g)* square: 422 cm/s, 20g</p> <p>*PCIe devices mass &lt;1.3kg NOTE: Values represent individual shock events and do not indicate repetitive shock events</p> <p>Vibration</p> <p>Operating random: 0.5g (rms), 5-300 Hz, up to 0.0025g<sup>2</sup>/Hz Non-operating random: 2.0g (rms), 5-500 Hz, up to 0.0150 g<sup>2</sup>/Hz NOTE: Values do not indicate continuous vibration.</p>
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### System Technical Specifications

#### PHYSICAL SECURITY AND SERVICEABILITY

<b>Access Panel</b>	Tool-less
<b>Optical Drive</b>	Tool-less, requires a 5.25" bay carrier
<b>Hard Drives</b>	Tool-less
<b>Expansion Cards</b>	Tool-less if card mass <1.3 kg
<b>Processor Socket</b>	Screw-in processor coolers
<b>Blue User Touch Points</b>	Yes, on tool-less internal chassis mechanisms
<b>Color-coordinated Cables and Connectors</b>	Yes
<b>Memory</b>	Tool-less
<b>System Board</b>	Tool-less
<b>Dual Color Power and HD LED on Front of Computer</b>	Yes
<b>Over-Temp Warning on Screen</b>	Yes
<b>Dual Function Front Power Switch</b>	Yes, causes a fail-safe power off when held for 10 seconds
<b>Padlock Support</b>	Padlock Loop (Rear): A rear bracket lets you attach a padlock (not included) to help secure the system and deter theft.
<b>Cable Lock Support</b>	Kensington Cable Lock (optional): Helps prevent theft of the entire system by securing it to a fixed object. The system includes a standard 3mm x 7mm Kensington lock slot located at the rear.
<b>Universal Chassis Clamp Lock Support</b>	No
<b>Solenoid Lock and Hood Sensor</b>	No
<b>Rear Port Control Cover</b>	No
<b>Serial, USB, Audio, Network, Enable/Disable Port Control</b>	New options. Not USB per port, filter out non hid pre boot environment
<b>Removable Media Write/Boot Control</b>	Yes, prevents ability to boot from removable media on supported devices (and can disable writes to media)



### System Technical Specifications

<b>Power-On Password</b>	Yes, prevents an unauthorized person from booting up the workstation
<b>Setup Password</b>	Yes, prevents an unauthorized person from changing the workstation configuration
<b>3.3V Aux Power LED on System PCA</b>	No
<b>NIC LEDs (integrated) (Green &amp; Amber)</b>	Yes
<b>CPUs and Heatsinks</b>	A torx driver (T30) is needed to remove the processor heatsink. CPU attached to heatsink via tool-less clip
<b>Power Supply Diagnostic LED</b>	Yes
<b>Front Power Button</b>	Yes
<b>Front Power LED</b>	Yes, white (normal), red (fault)
<b>Front Hard Drive Activity LED</b>	Yes, white
<b>Front ODD Activity LED</b>	Yes, on device
<b>Internal Speaker</b>	Yes
<b>System/Emergency ROM Flash Recovery</b>	Recovers corrupted system BIOS.
<b>Cooling Solutions</b>	Air cooled forced convection
<b>Power Supply Fans</b>	80 mm x 80 mm x 25 mm
<b>CPU Heatsink Fan</b>	108 mm x 108 mm x 25 mm
<b>Chassis Fan</b>	120 mm x 120 mm x 38 mm
<b>Memory Heatsink Fan</b>	Dual 60 mm x 60 mm x 25 mm
<b>HP PC Hardware Diagnostics UEFI</b>	HP PC Hardware Diagnostics (UEFI) enables hardware level testing outside the operating system on many components. The diagnostics can be invoked by pressing F2 at POST, and is available as a download from HP Support.
<b>Access Panel Key Lock</b>	Yes, top panel
<b>ACPI-Ready Hardware</b>	Advanced Configuration and Power Management Interface (ACPI). <ul style="list-style-type: none"> <li>▪ Allows the system to wake from a low power mode.</li> <li>▪ Controls system power consumption, making it possible to place individual cards and peripherals in a low-power or powered-off state without affecting other elements of the system.</li> </ul>
<b>Integrated Chassis Handles</b>	Yes, Rear full-grip handle and front ledge for easier handling.



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### *System Technical Specifications*

<b>Power Supply</b>	Requires T15 Torx or flat blade screwdriver
<b>PCI Card Retention</b>	Yes, rear (all), middle (full-height cards), front (cards with extender).
<b>Flash ROM</b>	Yes
<b>Diagnostic Power Switch LED on board</b>	Yes
<b>Clear Password Jumper</b>	Yes
<b>Clear CMOS Button</b>	Yes
<b>CMOS Battery Holder</b>	Yes
<b>DIMM Connectors</b>	Yes



### System Technical Specifications

#### Service, Support, and Warranty

On-site Warranty and Service<sup>1</sup>: One-year, limited warranty and service offering delivers on-site, next business-day<sup>2</sup> service for parts and labor and includes free telephone support<sup>3</sup> 8am - 5pm. Global coverage<sup>2</sup> ensures that any product purchased in one country and transferred to another, non-restricted country will remain fully covered under the original warranty and service offering. 24/7 operation will not void the HP warranty. Hard drive storage devices are not covered under warranty for 24/7 operation except for Enterprise class hard drives.

**NOTE 1:** Terms and conditions may vary by country. Certain restrictions and exclusions apply.

**NOTE 2:** On-site service may be provided pursuant to a service contract between HP and an authorized HP third-party provider, and is not available in certain countries. Global service response times are based on commercially reasonable best effort and may vary by country.

**NOTE 3:** Technical telephone support applies only to HP-configured, HP and HP-qualified, third-party hardware and software. Toll-free calling and 24x7 support service may not be available in some countries. HP Care Pack Services extend service contracts beyond the standard warranties. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <http://www.hp.com/go/lookuptool>. Service levels and response times for HP Care Packs may vary depending on your geographic location.

#### Certification and Compliance

- USGv6 compliant for Windows OS (USGv6 Compliance Report)
- Completed ISO/IEC 17025 accredited testing designed specifically for the USGv6 Test Program. USGv6 is a test program designated by NIST that provides a proof of compliance to IPv6 (Internet Protocol version 6) specifications outlined in current industry standards for common network products. It is meant as a strategic planning guide for USG (United States Government) IT acquisitions to help ensure the completeness, correctness, interoperability and security of early IPv6 product offerings so as to protect early USG investments in the technology. (source: UNH)

Environmental Sustainability questions concerning:

- Ecolabels (EPEAT, TCO, etc.)
- ENERGY STAR, California Energy Commission (CEC)
- Compliance with Environmental legislation (EU ErP, China CECP, EU RoHS and other countries)
- Supply Chain Social Environmental Responsibility (SER) (conflict minerals; human rights, etc.)
- Product specific environmental features (material content, packaging content, recycled content, etc.)
- China Energy Label (CEL)



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### *System Technical Specifications*

Please contact [sustainability@hp.com](mailto:sustainability@hp.com)

For country specific Regulatory Compliance approval documents or Regulatory and Safety questions concerning:

- Declarations of Conformity (for self-service, go to [https://www.hp.com/uk-en/certifications/technical/regulations-certificates.html?jumpid=ex\\_r135\\_uk/en/any/corp/hpuk-mu\\_chev/certificates](https://www.hp.com/uk-en/certifications/technical/regulations-certificates.html?jumpid=ex_r135_uk/en/any/corp/hpuk-mu_chev/certificates))
- GS Certificates
- Product Safety Certificates (UL, CB, BIS, etc.)
- EMC Certificates, Declarations of Conformity, or Certificates of Conformity (CE, FCC, ICES, etc.)
- CCC Certificates
- Ergonomics
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Please contact [techregshelp@hp.com](mailto:techregshelp@hp.com)



### System Technical Specifications

#### BIOS

<b>BIOS 64-bit Services</b>	BIOS supports 64-bit Operating systems.
<b>ATAPI</b>	ATAPI Removable Media Device BIOS Specification Version 1.0.
<b>WMI Support</b>	WMI is Microsoft's implementation of Web-Based Enterprise Management (WBEM) for Windows. WMI is fully compliant with the Distributed Management Task Force (DMTF) Common Information Model (CIM) and WBEM specifications.
<b>BIOS Power On</b>	Users can define a specific date and time for the system to power on.
<b>ROM Based Computer Setup Utility (F10)</b>	Review and customize system configuration settings controlled by the BIOS.
<b>System/Emergency ROM Flash Recovery with Video</b>	Recovers system BIOS in corrupted Flash ROM.
<b>Replicated Setup</b>	Saves BIOS settings to USB flash device in human readable file (HpSetup.txt). BiosConfigurationUtility.exe utility can then replicate these settings on machines being deployed without entering Computer Configuration Utility (F10 Setup).
<b>SMBIOS</b>	System Management BIOS Reference Specification, Version 3.5
<b>Boot Control</b>	Disables the ability to boot from removable media on supported devices.
<b>Memory Change Alert</b>	Alerts management console if memory is removed or changed.
<b>Thermal Alert</b>	Monitors the temperature state within the chassis. Three modes: <ul style="list-style-type: none"><li>▪ NORMAL - normal temperature ranges.</li><li>▪ ALERTED - excessive temperatures are detected. Raises a flag so action can be taken to avoid shutdown or provide for a smoother system shutdown.</li><li>▪ SHUTDOWN - excessive temperatures are encountered. Automatically shuts down the computer without warning before hardware component damage occurs</li></ul>
<b>Remote ROM Flash</b>	Provides secure, fail-safe ROM image management from a central network console.
<b>ACPI (Advanced Configuration and Power Management Interface)</b>	Allows the system to enter and resume from low power modes (sleep states). Enables an operating system to control system power consumption based on the dynamic workload. Makes it possible to place individual cards and peripherals in a low-power or powered-off state without affecting other elements of the system. Supports ACPI 6.5 for full compatibility with 64-bit operating systems.
<b>Ownership Tag</b>	A user-defined string stored in non-volatile memory that is displayed in the BIOS splash screen.
<b>Remote Wakeup/Remote Shutdown</b>	System administrators can power on, restart, and power off a client computer from a remote location.



### System Technical Specifications

<b>Instantly Available PC (Suspend to RAM - ACPI Sleep State)</b>	Allows for very low power consumption with quick resume time.
<b>Remote System Installation via F12 (PXE 2.1) (Remote Boot from Server)</b>	Allows a new or existing system to boot over the network and download software, including the operating system.
<b>ROM revision levels</b>	Reports the system BIOS revision level in Computer Configuration Utility (F10 Setup). Version is available through an industry standard interface (SMBIOS and WMI) so that management SW applications can use and report this information.
<b>System board revision level</b>	Allows management SW to read revision level of the system board. Revision level is digitally encoded into the HW and cannot be modified.
<b>Start-up Diagnostics (Power-on Self-Test)</b>	Assesses system health at boot time with selectable levels of testing.
<b>Auto Setup when new hardware installed</b>	System automatically detects addition of new hardware.
<b>Keyboard-less Operation</b>	The system can be booted without a keyboard.
<b>Localized ROM Setup</b>	Common BIOS image supports System Configuration Utility (F10 Setup) menus in 14 languages with local keyboard mappings.
<b>Asset Tag</b>	The user or MIS to set a unique tag string in non-volatile memory.
<b>Per-slot Control</b>	Allows I/O slot parameters (option ROM enable/disable, bifurcation, speed) to be configured individually.
<b>Adaptive Cooling</b>	Control parameters are set according to detected hardware configuration for optimal acoustics.
<b>Pre-boot Diagnostics</b>	(Pre-video) critical errors are reported via beeps and blinks on the power LED.
<b>UEFI Specification Revision</b>	2.9
<b>ACPI</b>	Advanced Configuration and Power Management Interface, Version 6.5
<b>ATA (IDE)</b>	AT Attachment 6 with Packet Interface (ATA/ATAPI-6), Revision 3b
<b>PCI</b>	PCI Firmware Specification, Revision 3.0
<b>PCI Express</b>	PCI Express Base Specification, Revision 5.0



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### *System Technical Specifications*

<b>SATA</b>	Serial ATA Specification, Revision 1.0a Serial ATA 3 Gb/s: Serial ATA Specification, Revision 2.5 Serial ATA 6 Gb/s: Serial ATA Specification, Revision 3.0
<b>SPD</b>	JEDEC JESD300-5
<b>TPM</b>	Trusted Computing Group TPM Specification Version 2.0. Common Criteria EAL4+ certified. FIPS 140-3 Certification TCG TPM Certified products list: <a href="http://www.trustedcomputinggroup.org/certification/tpm-certified-products/">http://www.trustedcomputinggroup.org/certification/tpm-certified-products/</a>
<b>xHCI Specification</b>	eXtensible Host Controller Interface for Universal Serial Bus Revision 1.2
<b>USB</b>	Universal Serial Bus Revision 1.1 Specification Universal Serial Bus Revision 2.0 Specification Universal Serial Bus Revision 3.1 Specification Universal Serial Bus Revision 3.2 Specification
<b>SMBIOS</b>	System Management BIOS Reference Specification, Version 3.5



### System Technical Specifications

#### SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

##### Eco-Label Certifications & Declarations

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

- IT ECO declaration
- US ENERGY STAR®
- US Federal Energy Management Program (FEMP)
- EPEAT® Gold with Climate+ registered in the United States. See <http://www.epeat.net> for registration status in your country.
- TCO Certified
- China Energy Conservation Program (CECP)
- China State Environmental Protection Administration (SEPA)
- Taiwan Green Mark
- Korea Eco-label
- Japan PC Green label\*
- [Product Carbon Footprint](#)
- At least 25% ocean bound plastic in system fans and 30% ocean bound plastic in the speaker<sup>1</sup>
- At least 60% post-consumer recycled plastic<sup>2</sup>
- At least 20% recycled metal<sup>3</sup>
- Low Halogen<sup>4</sup>
- 100% of HP paper-based packaging is from recycled or certified sustainable sources<sup>5</sup>
- Bulk packaging available

##### Sustainable Impact Specifications

##### System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data for the workstation model is based on a “Typically Configured workstation”.

##### Energy Consumption

(in accordance with US ENERGY STAR® test method)

	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Sort idle)	76.520	77.420	79.140
Normal Operation (Long idle)	74.650	75.910	77.650
Sleep	6.880	6.911	6.820
Off	3.471	3.477	3.655



### System Technical Specifications

**NOTE:**

Energy efficiency data listed is for an ENERGY STAR® compliant product if offered within the model family. HP computers marked with the ENERGY STAR® Logo are compliant with the applicable U.S. Environmental Protection Agency (EPA) ENERGY STAR® specifications for computers. If a model family does not offer ENERGY STAR® compliant configurations, then energy efficiency data listed is for a typically configured PC featuring a hard disk drive, a high efficiency power supply, and a Microsoft Windows® operating system.

Heat Dissipation*	115VAC, 60Hz	230VAC, 50Hz	100VAC, 50Hz
Normal Operation (Short idle)	260.933	264.002	269.867
Normal Operation (Long idle)	254.556	258.853	264.786
Sleep	23.460	23.566	23.256
Off	11.836	11.856	12.463

\*NOTE: Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

**Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)**

	Sound Power (L <sub>WAdr</sub> , bels)	Sound Pressure (L <sub>pA<sub>ms</sub></sub> , decibels)
Typically Configured - Idle	4.1	24
Fixed Disk - Random writes	4.2	25
Optical Drive - Sequential reads	4.2	25

**Longevity and Upgrading** This product can be upgraded, possibly extending its useful life by several years. Upgradeable features and/or components contained in the spare parts are available throughout the warranty period and or for up to "5" years after the end of production.



### System Technical Specifications

#### Additional Information

- This product is in compliance with the Restrictions of Hazardous Substances (RoHS) directive - 2011/65/EC.
- This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.
- This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).
- This product is in compliance with EPEAT 2025 criteria at the Gold level, see <http://www.epeat.net>
- Plastics parts weighing over 25 grams used in the product are marked per ISO11469 and ISO1043.
- This product is 95.8% recycle-able when properly disposed of at end of life.

#### Packaging Materials

<b>External:</b>	PAPER/Corrugated	TBD
	PAPER/Molded Pulp	TBD
	PLASTIC/Polyethylene low density - -LDPE	TBD

The plastic packaging material contains at least 100% recycled content.

#### RoHS Compliance

HP Inc. complies fully with materials regulations. HP Inc. was one of the first companies to extend the restrictions in the European Union (EU) Restriction of Hazardous Substances (RoHS) Directive to our products worldwide via the HP General Specification for the Environment (GSE). HP has contributed to the development of related legislation in Europe, as well as China, India, and Vietnam.

HP Inc. believes the RoHS directive and similar laws play an important role in promoting industry-wide elimination of substances of concern. HP Inc. has supported the inclusion of additional substances—including PVC, BFRs, and certain phthalates—in future RoHS legislation that pertains to electrical and electronics products.

To obtain a copy of the HP RoHS Compliance Statement, see [HP RoHS position statement](#).



### System Technical Specifications

#### Material Usage

This product does not contain any of the following substances in excess of regulatory limits (refer to the HP General Specification for the Environment at

<https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c05998906>):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants - may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Bis(2-Ethylhexyl) phthalate (DEHP)
- Benzyl butyl phthalate (BBP)
- Dibutyl phthalate (DBP)
- Diisobutyl phthalate (DIBP)
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Nickel - finishes must not be used on the external surface designed to be frequently handled or carried by the user.
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) - except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)



### System Technical Specifications

#### Packaging Usage

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

#### End-of-life Management and Recycling

HP offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to:

<https://h20195.www2.hp.com/V2/GetDocument.aspx?docname=c05403198>

or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: [HP Product Disassembly Instruction Website](#). These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

#### HP, Inc. Corporate Environmental Information

For more information about HP's commitment to the environment:

- Sustainable Impact Report
  - <https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c06040843>
- Eco-label certifications
  - [https://www.hp.com/us-en/sustainable-impact/document-reports.html#filters\\_documents\\_reports=-document\\_type-type\\_energy\\_star,type\\_epeat,type\\_tcoISO](https://www.hp.com/us-en/sustainable-impact/document-reports.html#filters_documents_reports=-document_type-type_energy_star,type_epeat,type_tcoISO)
- ISO 14001 certificates
  - <https://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c04777932>



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### System Technical Specifications

#### Footnotes

1. Percentage of ocean-bound plastic contained in each component varies by product. Ocean Bound plastic is expressed as a percentage of the total weight plastic. Ocean Bound plastic is based on the definition set by the UL2809 standard.
2. Post-consumer recycled plastic is expressed as a percentage of the total weight of the plastic, based on the definition set in the EPEAT criteria.
3. Recycled metal is expressed as a percentage of the total weight of the metal according to ISO 14021 definitions for metal parts over 25 grams.
4. External power supplies, WWAN modules, power cords, cables and peripherals excluded. Service parts obtained after purchase may not be Low Halogen.
5. HP paper and fiber-based packaging for PCs, displays, home and office print, and supplies is reported by suppliers as recycled or certified, with a minimum of 97% by volume verified by HP. Packaging is the box that comes with the product and all paper-based materials inside the box. Packaging for personal systems accessories and spare parts is not included. Plastic cushions are made from >90% recycled plastic.



### System Technical Specifications

#### MANAGEABILITY

##### Industry Standard Specifications

This product meets the following industry standard specifications for manageability functionality:

- DASH 1.2 (via Intel® LAN on motherboard)

##### Intel® Active Management Technology (AMT)

Intel® Active Management Technology (AMT) 19.10

An advanced set of remote management features and functionality providing IT administrators the latest and most effective tools to remotely discover, heal, and protect networked client systems regardless of the system's health or power state. AMT 19.10 includes the following advanced management functions:

- Power Management (on, off, reset, graceful shutdown, sleep and hibernate)
  - Support in Max Power Savings (Shutdown and Hibernate Modes)
- Hardware Inventory (includes BIOS and firmware revisions)
- Hardware Alerting
- Agent Presence
- System Defense Filters
- Serial Over LAN (SOL)
- USB Redirect (Media Redirection)
- ME Wake-on-LAN (WOL), even with Maximum Power Savings Enabled
- DASH 1.2 compliance
- IPv6 Support
- Fast Call for Help - a client inside or outside the firewall may initiate a call for help via BIOS screen, periodic connections, or alert triggered connection
- Remote Scheduled Maintenance - pre-schedule when the system connects to the IT or service provider console for maintenance.
- Remote Alerts - automatically alert IT or service provider if issues arise
- Access Monitor - Provides oversight into Intel® AMT actions to support security requirements
- PC Alarm Clock
- Microsoft NAP Support
- Host Base set-up and configuration
- Management Engine (ME) firmware roll back with same SVN number
- Local Time Sync to UTC
- Remote Memory Dump Command - Creates memory dump for debug

##### Intel® vPro® Technology

Yes, when configured with an Intel® vPro™ supporting processor.



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### *System Technical Specifications*

1. HP Care Pack Services are extended service contracts that go beyond the standard limited warranties. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: <http://www.hp.com/go/lookuptool>. Additional HP Care Pack Services information by product is available at: <http://www.hp.com/hps/carepack>. Service levels and response times for HP Care Packs may vary depending on your geographic location. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.



### Technical Specifications - Storage and Drives

#### STORAGE

<b>HP Z Turbo 512GB PCIe- 4x4 2280 TLC M.2 SSD</b>	<b>Capacity</b>	512GB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	300 TBW
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	6400MB/s <sup>1</sup>
	<b>Sequential Write</b>	3400MB/s <sup>1</sup>
	<b>Random Read</b>	600K IOPS <sup>1</sup>
	<b>Random Write</b>	600K IOPS <sup>1</sup>

<b>HP Z Turbo 512GB PCIe- 4x4 2280 SED OPAL2 TLC M.2 SSD</b>	<b>Capacity</b>	512GB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	300 TBW
	<b>Reliability</b>	1.5M hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	6400MB/s
	<b>Sequential Write</b>	3400MB/s
	<b>Random Read</b>	600K IOPS
	<b>Random Write</b>	600K IOPS
	<b>Self-Encrypting Drive</b>	OPAL2
	<b>Support</b>	



### Technical Specifications - Storage and Drives

<b>512GB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD</b>	<b>Capacity</b>	512 GB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	320 TBW
	<b>Reliability</b>	1.5M hours
	<b>Interface</b>	PCI Express 3.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 3400MB/s
	<b>Sequential Write</b>	up to 2500MB/s
	<b>Random Read</b>	up to 420K IOPS
	<b>Random Write</b>	up to 635K IOPS
	<b>Self-Encrypting Drive</b>	OPAL2/FIPS 140-2
	<b>Support</b>	

<b>Citadel 512GB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD</b>	<b>Capacity</b>	512 GB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	320TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 3.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 3400MB/s
	<b>Sequential Write</b>	up to 2500MB/s
	<b>Random Read</b>	up to 420K IOPS
	<b>Random Write</b>	up to 635K IOPS
	<b>Self-Encrypting Drive</b>	OPAL2/FIPS 140-2
	<b>Support</b>	



### Technical Specifications - Storage and Drives

<b>HP Z Turbo 1TB PCIe-4x4 2280 TLC M.2 SSD</b>	<b>Capacity</b>	1TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	400TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 6500MB/s
	<b>Sequential Write</b>	up to 5000MB/s
	<b>Random Read</b>	up to 800K IOPS
<b>Random Write</b>	up to 800K IOPS	

1. Actual performance may vary.



### Technical Specifications - Storage and Drives

<b>HP Z Turbo 1TB PCIe-4x4 2280 SED OPAL2 TLC M.2 SSD</b>	<b>Capacity</b>	1TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	400TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 6500MB/s
	<b>Sequential Write</b>	up to 5000MB/s
	<b>Random Read</b>	up to 800K IOPS
	<b>Random Write</b>	up to 800K IOPS
	<b>Self-Encrypting Drive</b>	OPAL 2
<b>Support</b>		

<b>Citadel 1TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD</b>	<b>Capacity</b>	1TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	1620 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 3.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 3400MB/s
	<b>Sequential Write</b>	up to 3000MB/s
	<b>Random Read</b>	up to 720K IOPS
	<b>Random Write</b>	up to 690K IOPS
	<b>Self-Encrypting Drive</b>	OPAL2/FIPS 140-2
<b>Support</b>		



### Technical Specifications - Storage and Drives

<b>HP Z Turbo 1TB PCIe-5x4 2280 M.2 SSD</b>	<b>Capacity</b>	1TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	400 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 5.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 12000MB/s
	<b>Sequential Write</b>	up to 10000MB/s
	<b>Random Read</b>	up to 1500K IOPS
	<b>Random Write</b>	up to 1300K IOPS

<b>HP Z Turbo 1TB PCIe-5x4 2280 SED OPAL2 M.2 SSD</b>	<b>Capacity</b>	1TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	400 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 5.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 12000MB/s
	<b>Sequential Write</b>	up to 10000MB/s
	<b>Random Read</b>	up to 1500K IOPS
	<b>Random Write</b>	up to 1300K IOPS
<b>Self-Encrypting Drive</b>	OPAL2	
<b>Support</b>		



### Technical Specifications - Storage and Drives

<b>HP Z Turbo 2TB PCIe-4x4 2280 TLC M.2 SSD</b>	<b>Capacity</b>	2 TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	500 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 6500MB/s
	<b>Sequential Write</b>	up to 5000MB/s
	<b>Random Read</b>	up to 800K IOPS
	<b>Random Write</b>	up to 800K IOPS

<b>HP Z Turbo 2TB PCIe-4x4 2280 SED OPAL2 TLC M.2 SSD</b>	<b>Capacity</b>	2TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	500 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 6500MB/s
	<b>Sequential Write</b>	up to 5000MB/s
	<b>Random Read</b>	up to 800K IOPS
	<b>Random Write</b>	up to 800K IOPS
<b>Self-Encrypting Drive</b>	OPAL2	
<b>Support</b>		



### Technical Specifications - Storage and Drives

<b>HP Z Turbo 2TB PCIe-5x4 2280 M.2 NMIC SSD</b>	<b>Capacity</b>	2TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	500 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 5.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 12000MB/s
	<b>Sequential Write</b>	up to 11000MB/s
	<b>Random Read</b>	up to 1500K IOPS
	<b>Random Write</b>	up to 1300K IOPS

<b>HP Z Turbo 2TB PCIe-5x4 2280 SED OPAL2 M.2 SSD</b>	<b>Capacity</b>	2TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	500 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 5.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 12000MB/s
	<b>Sequential Write</b>	up to 11000MB/s
	<b>Random Read</b>	up to 1500K IOPS
	<b>Random Write</b>	up to 1300K IOPS

<b>Self-Encrypting Drive</b>	OPAL2
<b>Support</b>	



### Technical Specifications - Storage and Drives

<b>HP Z Turbo 4TB PCIe-4x4 2280 M.2 SSD</b>	<b>Capacity</b>	4TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	600 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 6500MB/s
	<b>Sequential Write</b>	up to 5000MB/s
	<b>Random Read</b>	up to 800K IOPS
	<b>Random Write</b>	up to 800K IOPS

<b>HP Z Turbo 4TB PCIe-4x4 2280 SED OPAL2 M.2 SSD</b>	<b>Capacity</b>	4TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	600 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 6500MB/s
	<b>Sequential Write</b>	up to 5000MB/s
	<b>Random Read</b>	up to 800K IOPS
	<b>Random Write</b>	up to 800K IOPS
<b>Self-Encrypting Drive</b>	OPAL2	
<b>Support</b>		



### Technical Specifications - Storage and Drives

<b>HP Z Turbo 4TB PCIe-5x4 2280 M.2 SSD</b>	<b>Capacity</b>	4TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	600 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 5.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 12000MB/s
	<b>Sequential Write</b>	up to 11000MB/s
	<b>Random Read</b>	up to 1500K IOPS
	<b>Random Write</b>	up to 1300K IOPS

<b>HP Z Turbo 8TB PCIe-4x4 2280 NVMe M.2 SSD</b>	<b>Capacity</b>	8TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	2400 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 4.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 6500MB/s
	<b>Sequential Write</b>	up to 5000MB/s
	<b>Random Read</b>	up to 800K IOPS
	<b>Random Write</b>	up to 800K IOPS



### Technical Specifications - Storage and Drives

<b>1TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD</b>	<b>Capacity</b>	1TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	1620 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 3.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 3400MB/s
	<b>Sequential Write</b>	up to 3000MB/s
	<b>Random Read</b>	up to 720K IOPS
	<b>Random Write</b>	up to 690K IOPS
	<b>Self-Encrypting Drive</b>	OPAL2/FIPS 140-2
<b>Support</b>		

<b>HP Z Turbo 2TB PCIe-5x4 2280 M.2 SSD</b>	<b>Capacity</b>	2TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	500 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 5.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 12000MB/s
	<b>Sequential Write</b>	up to 11000MB/s
	<b>Random Read</b>	up to 1500K IOPS
	<b>Random Write</b>	up to 1300K IOPS



### Technical Specifications - Storage and Drives

<b>Citadel 2TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD</b>	<b>Capacity</b>	2TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	3140 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 3.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 3400MB/s
	<b>Sequential Write</b>	up to 3000MB/s
	<b>Random Read</b>	up to 720K IOPS
	<b>Random Write</b>	up to 690K IOPS
	<b>Self-Encrypting Drive</b>	OPAL2/FIPS 140-2
	<b>Support</b>	

<b>2TB PCIe-3x4 2280 NVMe SED OPAL2 FIPS 140-2 TLC M.2 SSD</b>	<b>Capacity</b>	2TB
	<b>Protocol</b>	PCIe
	<b>Form Factor</b>	M.2
	<b>Controller</b>	NVMe
	<b>NAND Type</b>	3D TLC
	<b>Endurance</b>	3140 TBW (TB Written)
	<b>Reliability</b>	1.5M Hours
	<b>Interface</b>	PCI Express 3.0 x4 electrical
	<b>Operating Temperature</b>	32° to 158° F (0° to 70° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 3400MB/s
	<b>Sequential Write</b>	up to 3000MB/s
	<b>Random Read</b>	up to 720K IOPS
	<b>Random Write</b>	up to 690K IOPS
	<b>Self-Encrypting Drive</b>	OPAL2/FIPS 140-2
	<b>Support</b>	



### Technical Specifications - Storage and Drives

<b>4TB SATA 7200 rpm</b>	<b>Capacity</b>	4TB
<b>6Gb/s 3.5" HDD</b>	<b>Protocol</b>	SATA
<b>(Enterprise Class)</b>	<b>Form Factor</b>	3.5"
	<b>Controller</b>	AHCI
	<b>Reliability</b>	2.0M Hours
	<b>Rated Power On Hours</b>	8760/yr
	<b>Annualized Failure Rate</b>	<0.62%
	<b>(based on Rated POH)</b>	
	<b>Width</b>	
	<b>Media Diameter</b>	3.5in; 8.9 cm
	<b>Physical Size</b>	4 in; 10.17cm
	<b>Interface</b>	Serial ATA (6.0Gb/s), NCQ enabled
	<b>Synchronous Transfer Rate</b>	Up to 600MB/s
	<b>(Maximum)</b>	
	<b>Buffer</b>	256MB
	<b>Seek Time (typical reads, includes controller overhead, including settling)</b>	
	<b>Single Track</b>	0.7ms [1]
	<b>Average</b>	8.5ms [1]
	<b>Full Stroke</b>	15.7ms [1]
	<b>Rotational Speed</b>	7,200 rpm
	<b>Operating Temperature</b>	41° to 131° F (5° to 55° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 226MB/s
	<b>Sequential Write</b>	up to 226MB/s
	<b>Enterprise Class Features</b>	High Reliability



### Technical Specifications - Storage and Drives

<b>8TB SATA 7200 rpm 6Gb/s 3.5" HDD (Enterprise Class)</b>	<b>Capacity</b>	8TB
	<b>Protocol</b>	SATA
	<b>Form Factor</b>	3.5"
	<b>Controller</b>	AHCI
	<b>Reliability</b>	2.0M Hours
	<b>Rated Power On Hours</b>	8760/yr
	<b>Annualized Failure Rate (based on Rated POH)</b>	<0.62%
	<b>Width</b>	
	<b>Media Diameter</b>	3.5in; 8.9 cm
	<b>Physical Size</b>	4 in; 10.17cm
	<b>Interface</b>	Serial ATA (6.0Gb/s), NCQ enabled
	<b>Synchronous Transfer Rate (Maximum)</b>	Up to 600MB/s <sup>1</sup>
	<b>Buffer</b>	256MB
	<b>Seek Time (typical reads, includes controller overhead, including settling)</b>	
	<b>Single Track</b>	0.7ms
	<b>Average</b>	8.5ms
	<b>Full Stroke</b>	15.7ms
	<b>Rotational Speed</b>	7,200 rpm
	<b>Operating Temperature</b>	41° to 131° F (5° to 55° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 226MB/s
	<b>Sequential Write</b>	up to 226MB/s
	<b>Enterprise Class Features</b>	High Reliability



### Technical Specifications - Storage and Drives

<b>12TB SATA 7200 rpm</b>	<b>Capacity</b>	12TB
<b>6Gb/s 3.5" HDD</b>	<b>Protocol</b>	SATA
<b>(Enterprise Class)</b>	<b>Form Factor</b>	3.5"
	<b>Controller</b>	AHCI
	<b>Reliability</b>	2.0M Hours
	<b>Rated Power On Hours</b>	8760/yr
	<b>Annualized Failure Rate (based on Rated POH)</b>	<0.62%
	<b>Width</b>	
	<b>Media Diameter</b>	3.5in; 8.9 cm
	<b>Physical Size</b>	4 in; 10.17cm
	<b>Interface</b>	Serial ATA (6.0Gb/s), NCQ enabled
	<b>Synchronous Transfer Rate (Maximum)</b>	Up to 600MB/s <sup>1</sup>
	<b>Buffer</b>	128MB
	<b>Seek Time (typical reads, includes controller overhead, including settling)</b>	
	<b>Single Track</b>	0.7ms
	<b>Average</b>	8.5ms
	<b>Full Stroke</b>	15.7ms
	<b>Rotational Speed</b>	7,200 rpm
	<b>Operating Temperature</b>	41° to 131° F (5° to 55° C)
	<b>Performance</b>	
	<b>Sequential Read</b>	up to 226MB/s
	<b>Sequential Write</b>	up to 226MB/s
	<b>Enterprise Class Features</b>	High Reliability



### Technical Specifications - Graphics

#### GRAPHICS

<b>NVIDIDA RTX A400 4 GB Graphics</b>	<b>Form Factor</b>	Half Height, Single Slot (2.7" Height x 6.4" Length)
	<b>Graphics Controller</b>	Max Power: 50 Watts Cooling Solution: Active fan heatsink
	<b>Bus Type</b>	
	<b>Memory</b>	4GB GDDR6 Memory Bandwidth: 96 GB/s Memory Width: 128-bit
	<b>Connectors</b>	4x Mini DisplayPort 1.4a
	<b>Maximum Resolution</b>	4x 4096 x 2160 @ 120 Hz 4x 5120 x 2880 @ 60 Hz 2x 7680 x 4320 @ 60 Hz
	<b>Image Quality Features</b>	Advanced support for 8-bit and 10-bit per RGB color component. High bandwidth scaler for high quality up and downscaling
	<b>Display Output</b>	4 full physical DP1.3 HBR3 / DP1.4 HDR outputs FreeSync support
	<b>GPU Architecture</b>	GCN 4th Generation
	<b>Shading Architecture</b>	Shader Model 5.1
	<b>Supported Graphics APIs</b>	DirectX®12 OpenGL® 4.5 OpenCL™ 2.0 Vulkan™ 1.0
	<b>Available Graphics Drivers</b>	Windows 11 64-bit Linux® 64-bit (selected Enterprise distributions)

HP qualified drivers may be preloaded or available from the HP support Web site:

<http://welcome.hp.com/country/us/en/support.html>



### Technical Specifications - Graphics

<b>NVIDIA® RTX™ A1000 8GB</b>	<b>Form Factor</b>	Single Slot, Low Profile (2.7" H x 6.1" L)
	<b>Graphics Controller</b>	Max Power: 50 Watts Cooling Solution: Active fan heatsink
	<b>Bus Type</b>	PCI Express 4.0 x 8
	<b>Memory</b>	4GB GDDR6 Memory Bandwidth: 96 GB/s Memory Width: 128-bit
	<b>Connectors</b>	4x Mini DisplayPort 1.4a
	<b>Maximum Resolution</b>	4x 4096 x 2160 @ 120 Hz 4x 5120 x 2880 @ 60 Hz 2x 7680 x 4320 @ 60 Hz
	<b>Image Quality Features</b>	Advanced support for 8-bit and 10-bit per RGB color component. High bandwidth scaler for high quality up and downscaling
	<b>Display Output</b>	4 full physical DP1.3 HBR3 / DP1.4 HDR outputs FreeSync support
	<b>GPU Architecture</b>	GCN 4th Generation
	<b>Shading Architecture</b>	Shader Model 5.1
	<b>Supported Graphics APIs</b>	DirectX®12 OpenGL® 4.5 OpenCL™ 2.0 Vulkan™ 1.0
	<b>Available Graphics Drivers</b>	Windows 11 64-bit Linux® 64-bit (selected Enterprise distributions)
		HP qualified drivers may be preloaded or available from the HP support Web site: <a href="http://welcome.hp.com/country/us/en/support.html">http://welcome.hp.com/country/us/en/support.html</a>



### Technical Specifications - Graphics

<b>NVIDIA RTX PRO 2000 Blackwell 16 GB Graphics</b>	<b>Form Factor</b>	Half Height, Half Length (HHHL) 6.6", Double-slot NVIDIA Form Factor 6.0 Compliant
	<b>Graphics Controller</b>	Max Power: 70 Watts Thermal Solution: Active Cooled
	<b>Bus Type</b>	PCI Express 5.0 x 8 Lane and polarity reversal supported
	<b>Memory</b>	16GB GDDR7 with ECC Memory Bandwidth: Up to 288 GB/s Memory Bus width: 128 bits
	<b>Connectors</b>	4x mini DisplayPort 2.1b
	<b>Maximum Resolution</b>	3840 × 2160 × 24 bpp at 480Hz1 7680 × 4320 × 24 bpp at 165Hz1
	<b>GPU Architecture</b>	Blackwell
	<b>Shading Architecture</b>	Shader Model 6.7
	<b>Supported Graphics APIs</b>	DirectX 12 Shader Model 6.7 OpenGL 4.65 Vulkan 1.4
	<b>Available Graphics Drivers</b>	Linux: 570.190 or later Windows: 570 or later



### Technical Specifications - Graphics

<b>NVIDIA RTX PRO 4000</b> <b>Blackwell 16 GB Graphics</b>	<b>Form Factor</b>	Full-height, full-length (FHFL) 9.5", single-slot NVIDIA Form Factor 6.0 compliant	
	<b>Graphics Controller</b>	Max Power: 145W Thermal Solution: Active cooled	
	<b>Bus Type</b>	PCI Express 5.0 ×16	
	<b>Memory</b>	24GB Memory Bandwidth: Up to 672 GB/s Memory Width: 192 bits	
	<b>Connectors</b>	4x DisplayPort 2.1b	
	<b>Maximum Resolution</b>	4x 3840 x 2160 @ 165 Hz 2x 7680 x 43320 @ 100 Hz	
	<b>GPU Architecture</b>	Blackwell	
	<b>Shading Architecture</b>	Shader Model 6.6	
	<b>Supported Graphics APIs</b>	DirectX 12 Shader Model 6.6 OpenGL 4.6 Vulkan 1.3	
	<b>Available Graphics Drivers</b>	Linux: 570.169 or later Windows: 570 or later	
	<b>NVIDIA RTX PRO 4500</b> <b>Blackwell 32 GB Graphics</b>	<b>Form Factor</b>	Full-height, full-length (FHFL) 10.5", dual-slot NVIDIA Form Factor 6.0 compliant
		<b>Graphics Controller</b>	Max Power: 200W Thermal Solution: Active cooled
<b>Bus Type</b>		PCI Express 5.0 ×16 Lane and polarity reversal supported	
<b>Memory</b>		32GB GDDR7 with ECC Memory Bandwidth: Up to 896 GB/s Memory Width: 256 bits	
<b>Connectors</b>		4 x DisplayPort 2.1b	
<b>Maximum Resolution</b>		4x 3840 x 2160 @ 165 Hz	



### Technical Specifications - Graphics

		2x 7680 x 4320 @ 100 Hz
	<b>GPU Architecture</b>	NVIDIA Blackwell
	<b>Supported Graphics APIs</b>	DirectX 12 Shader Model 6.6 OpenGL 4.63 Vulkan 1.3
	<b>Available Graphics Drivers</b>	Linux: 570.169 or later Windows: 570 or later
<b>NVIDIA RTX PRO 5000 Blackwell 32 GB Graphics</b>	<b>Form Factor</b>	Full-height, full-length (FHFL) 10.5", dual-slot NVIDIA Form Factor 6.0 compliant
	<b>Graphics Controller</b>	Max Power: 300W Thermal Solution: Active cooling
	<b>Bus Type</b>	PCI Express 5.0 x16 Lane and polarity reversal supported
	<b>Memory</b>	48 GB GDDR7 with ECC Memory Bandwidth: Up to 1344 GB/s Memory Width: 384 bits
	<b>Connectors</b>	4x DisplayPort 2.1b
	<b>Maximum Resolution</b>	4x 4,096 x 2,160 @ 120 Hz 4x 5,120 x 2,880 @ 60 Hz 2x 7,680 x 4,320 @ 60 Hz
	<b>GPU Architecture</b>	NVIDIA Blackwell
	<b>Shading Architecture</b>	Shader Model 6.6
	<b>Supported Graphics APIs</b>	DirectX 12 Shader Model 6.6 OpenGL 4.63 Vulkan 1.3
	<b>Available Graphics Drivers</b>	Linux: 570.169 or later Windows: 570 or later



### Technical Specifications - Graphics

<b>NVIDIA RTX PRO 6000 Blackwell Max-Q 300W 96 GB Graphics</b>	<b>Form Factor</b>	Full-height, full-length (FHFL) 10.5", dual-slot NVIDIA Form Factor 6.0 compliant	
	<b>Graphics Controller</b>	Max Power: 300W Thermal Solution: Active cooled	
	<b>Bus Type</b>	PCI Express 5.0 ×16 Lane and polarity reversal supported	
	<b>Memory</b>	96 GB GDDR7 with ECC Memory Bandwidth: Up to 1792 GB/s Memory Width: 512 bits	
	<b>Connectors</b>	4x DisplayPort 2.1b	
	<b>Maximum Resolution</b>	4x 3840 x 2160 @ 165 Hz 2x 7680 x 4320 @ 100 Hz	
	<b>GPU Architecture</b>	NVIDIA Blackwell	
	<b>Shading Architecture</b>	Shader Model 6.6	
	<b>Supported Graphics APIs</b>	DirectX 12 Shader Model 6.6 OpenGL 4.63 Vulkan 1.3	
	<b>Available Graphics Drivers</b>	Linux: 570.169 or later Windows: 570 or later	
	<b>NVIDIA RTX PRO 6000 Blackwell 96 GB Graphics</b>	<b>Form Factor</b>	Extra-height, full-length (XHFL) 12.3", dual-slot NVIDIA Form Factor 6.0 compliant
		<b>Graphics Controller</b>	Max Power: 600W Thermal Solution: Active Cooled
		<b>Bus Type</b>	PCI Express 5.0 ×16 Lane and polarity reversal supported
<b>Memory</b>		96 GB GDDR7 with ECC Memory Bandwidth: Up to 1792 GB/s Memory Width: 512 bits	
<b>Connectors</b>		4x DisplayPort 2.1b	



### Technical Specifications - Graphics

<b>Maximum Resolution</b>	4x 4096 x 2160 @ 120 Hz 4x 5120 x 2880 @ 60 Hz 2x 7680 x 4320 @ 60 Hz
<b>GPU Architecture</b>	NVIDIA Blackwell
<b>Shading Architecture</b>	Shader Model 6.6
<b>Supported Graphics APIs</b>	DirectX 12 Shader Model 6.6 OpenGL 4.63 Vulkan 1.3
<b>Available Graphics Drivers</b>	Linux: 570.169 or later Windows: 570 or later

### NVIDIA A800 40 GB Graphics

<b>Form Factor</b>	Full-height, full-length (FHFL) 10.5", dual-slot NVIDIA Form Factor 5.5 compliant
<b>Graphics Controller</b>	Max Power: 240W Thermal Solution: Active Cooled
<b>Bus Type</b>	PCI Express 4.0 ×16 Lane and polarity reversal supported
<b>Memory</b>	40GB HBM2 Memory Bandwidth: Up to 1555 GB/s Memory Width: 5120 bits
<b>Connectors</b>	N/A
<b>GPU Architecture</b>	NVIDIA Ampere
<b>Available Graphics Drivers</b>	Linux: R535 or later Windows: R535 or later



### Technical Specifications - Optical and Removable Storage

<b>HP 9.5mm Slim DVD Writer</b>	<b>Description</b>	9.5mm height, tray-load
	<b>Mounting Orientation</b>	Either horizontal or vertical
	<b>Interface Type</b>	SATA/ATAPI
	<b>Dimensions (WxHxD)</b>	128 x 9.5 x 127mm
	<b>Supported Media Types</b>	DVD+R
		DVD+RW
		DVD+R DL
		DVD-R DL
		DVD-R
		DVD-RW
<b>Disc Capacity</b>	<b>DVD-ROM</b>	8.5 GB DL or 4.7 GB standard
	<b>Access Times</b>	
<b>Access Times</b>	<b>Full Stroke DVD</b>	< 200 ms (seek)
	<b>Full Stroke CD</b>	< 200 ms (seek)
<b>Maximum Data Transfer Rates</b>	<b>CD ROM Read</b>	CD-ROM, CD-R Up to 24X CD-RW Up to 24X
	<b>DVD ROM Read</b>	DVD+RW Up to 8X DVD-RW Up to 8X DVD+R DL Up to 8X DVD-R DL Up to 8X DVD-ROM Up to 8X DVD-ROM DL Up to 8X DVD+R Up to 8X DVD-R Up to 8X
<b>Access Times</b>	<b>Full Stroke DVD</b>	< 230 ms (typical)
	<b>Full Stroke CD</b>	< 220 ms (typical)
<b>Power</b>	<b>Source</b>	SATA DC power receptacle
	<b>DC Power Requirements</b>	5 VDC ± 5%-100 mV ripple p-p
	<b>DC Current</b>	5 VDC -< 800 mA typical, <1600 mA maximum



### Technical Specifications - Optical and Removable Storage

	<b>Operating Environmental</b> (all conditions non-condensing)	<b>Temperature</b> <b>Relative Humidity</b> <b>Maximum Wet Bulb Temperature</b>	41° to 122° F (5° to 50° C) 10% to 80% 84° F (29° C)	
	<b>Operating Systems Supported</b>	Windows 11 Linux®		
	<b>Kit Contents</b>	HP SATA DVD Writer drive, installation guide.		
	<b>Weight</b>	0.35 lbs. (0.16 kg)		
<b>HP 9.5mm Slim DVD-ROM Drive</b>	<b>Description</b>	9.5mm height, tray-load		
	<b>Mounting Orientation</b>	Either horizontal or vertical		
	<b>Interface Type</b>	SATA / ATAPI		
	<b>Dimensions (WxHxD)</b>	128 x 9.5 x 127mm		
	<b>Supported Media Types</b>	DVD+R DVD+RW DVD+R DL DVD-R DL DVD-R DVD-RW CD-R CD-RW		
	<b>Disc Capacity</b>	<b>DVD-ROM</b>	8.5 GB DL or 4.7 GB standard	
	<b>Access Times</b>	<b>DVD-ROM Single Layer</b>	< 110 ms (typical)	
		<b>CD-ROM Mode 1</b>	< 110 ms (typical)	
		<b>Full Stroke DVD</b>	< 230 ms (typical)	
		<b>Full Stroke CD</b>	< 220 ms (typical)	
<b>Power</b>	<b>Source</b>	SATA DC power receptacle		
	<b>DC Power Requirements</b>	5 VDC ± 5%-100 mV ripple p-p		
	<b>DC Current</b>	5 VDC - <800mA typical, < 1600 mA maximum		



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### Technical Specifications - Optical and Removable Storage

<b>Operating Environmental</b> (all conditions non-condensing)	<b>Temperature</b>	41° to 122° F (5° to 50° C)
	<b>Relative Humidity</b>	10% to 80%
	<b>Maximum Wet Bulb Temperature</b>	84° F (29° C)
<b>Operating Systems Supported</b>	Windows 11	
	Linux®	
<b>Kit Contents</b>	HP SATA DVD Writer drive, installation guide.	



### Technical Specifications - Networking and Communications

#### NETWORKING / COMMUNICATION

##### Integrated Intel® I219LM PCIe GbE Controller (Intel® vPro™ with Intel® AMT 19.0)

<b>Connector</b>	RJ-45
<b>Cabling</b>	Twisted pair up to 100m
<b>Controller</b>	Intel® I219LM GbE platform LAN connect networking controller
<b>Memory</b>	3 KB Tx and 3KB Rx FIFO packet buffer memory
<b>Data Rates Supported</b>	10/100/1000 Mbps
<b>Compliance</b>	802.1as/1588, 802.1p, 802.1Q, 802.3, 802.3ab, 802.3az, 802.3i, 802.3u, 802.3z
<b>Bus Architecture</b>	PCI Express and SMBus PCIe-based interface for active state operation (S0 state) and SMBus for host and
<b>Data Transfer Mode</b>	management traffic (Sx low power state)
<b>Power Requirement</b>	Requires 3.3V (integrated regulators for core Vdc)
<b>Boot ROM Support</b>	Yes
<b>Network Transfer Mode</b>	Full-duplex; Half-duplex (not supported for the 1000BASE-T transceiver)
<b>Network Transfer Rate</b>	10BASE-T (half-duplex) 10 Mbps 10BASE-T (full-duplex) 20 Mbps 100BASE-TX (half-duplex) 100 Mbps 100BASE-TX (full-duplex) 200 Mbps 1000BASE-T (full-duplex) 2000 Mbps
<b>Management Capabilities</b>	vPro, WOL, auto MDI crossover, PXE, Muli-port teaming, ACPI, Advanced cable diagnostic, loopback modes, AMT 19 support, Circuit Breaker, VLAN, Multicast Listener Discovery (MLD)

The onboard LAN supports RDP Wake on LAN function. If some networking device does not support Modern standby feature for WOL, HP suggests using this function as an alternate solution for WOL G3-S5/ S5/S4/MSC wake.

NOTE1: NDIS driver limitation when using Win11 OS, I219 switches to NDIS Driver and it only supports IPV4 wake from MSC. If using IPV6, I219 cannot wake up from MSC.

NOTE2: Cannot wake from S4 when using the NDIS Driver.



### Technical Specifications - Networking and Communications

#### HP 1-Port 1GbE Flex IO NIC

<b>Connector</b>	RJ-45 (Single Port)
<b>Cabling</b>	1GbE over Category 5e (or better) up to 100m
<b>Controller</b>	Realtek 8153 Ethernet Controller
<b>Data Rates Supported</b>	10/100/1000 Mbps
<b>Compliance</b>	802.3 (LAN) 802.3u (100BASE-TX) 802.3ab (1000BASE-T) 802.3x (Ethernet Flow Control) 802.1Q (Virtual LAN) 802.1P Layer 2 Priority Encoding 802.3az (Energy Efficient Ethernet)
<b>Bus Architecture</b>	USB
<b>Power Requirement</b>	Requires 3.3V (integrated regulators for core Vdc)
<b>Boot ROM Support</b>	Yes
<b>Network Transfer Mode</b>	Full-duplex; Half-duplex 1000BASE-T Full-Duplex 100BASE-TX Full-Duplex 100BASE-TX Half-Duplex 10BASE-T Full-Duplex 10BASE-T Half-Duplex
<b>Operating Temperature</b>	32° to 131° F (0° to 55° C)
<b>Dimensions (HxW)</b>	1.5 in x 1.5 in. x 0.75 in (3.81 cm x 3.81 cm x 1.9 cm)
<b>Operating System Driver Support</b>	Windows 11, Linux®

#### Intel® I226-T1 2.5GbE Ethernet Network Adaptor

<b>Connector</b>	RJ-45
<b>Cabling</b>	Cat 6 or better up to 100 meters
<b>Controller</b>	Intel® Ethernet I226 Controller
<b>Network Transfer Rates Supported</b>	2.5Gbps, 1Gbps, 100/10Mbps
<b>Compliance</b>	IEEE 802.3, 802.3u (auto-negotiation), 802.3ab, 1588, 802.1AS-Rev, 802.1Qav, 802.1Qbu, 802.1Qbv, 802.3br, 802.3az
<b>Data Path Width</b>	PCIe Gen2x1
<b>Network Transfer Rate</b>	2.5Gbps, 1Gbps, 100/10Mbps
<b>Data Path Width</b>	PCIe Gen2x1



### Technical Specifications - Networking and Communications

<b>Power Requirement</b>	1.2 Watts (typical)
<b>Operating Temperature</b>	32° to 158° F (0°C to 70°C)
<b>Dimensions (HxW)</b>	2.7 in x 2.57 in. (68.7mm x 65.3mm) [Excluding bracket]
<b>Operating System Driver</b>	Windows 11 64-Bit Linux®
<b>Kit Contents</b>	• Intel® I226-T1 1-Port 2.5GbE NIC with standard height bracket attached Low-profile bracket • Product Literature

#### **NVIDIA® Mellanox® ConnectX-6 DX Dual Port 10/25GbE SFP28 NIC**

<b>Connector</b>	Dual-port SFP28
<b>Cabling</b>	Transceiver with Multi-Mode Fiber OM3 or OM4 (OM4 or better recommended)
<b>Controller</b>	ConnectX-6 Dx
<b>Network Transfer Rates</b>	1/10/25 GbE
<b>Supported</b>	
<b>Data Path Width</b>	PCIe Gen4x8
<b>Power Requirement</b>	19.74W Maximum power available through SFP28 port: 2.5W (each port)
<b>Operating Temperature</b>	32° to 131° F (0° to 55° C)
<b>Dimensions (HxW)</b>	6.22in. x 2.67in (158mm x 68mm)
<b>Operating System Driver</b>	Windows 11 64-Bit Linux®
<b>Kit Contents</b>	• NVIDIA Mellanox ConnectX-6 SFP28 25GbE NIC with standard height bracket attached • Low-profile bracket • Product Literature

The NVIDIA Mellanox ConnectX-6 DX network adapter requires either a PCIeG4 x4 or PCIeG4 x8 slot (electrical connection) to have full performance with two 25GbE SFP28 transceivers installed in the network adapter. When the network adapter is installed in a PCIeG3 x4 slot, the performance will be limited when installing two 25GbE SFP28 transceivers or installing a 25GbE SFP28 transceiver plus a 10GbE SFP+ transceiver.

Transceivers sold separately. Please select the appropriate transceiver speed for intended application.



### Technical Specifications - Networking and Communications

#### HP 25GbE SFP28 LC Fiber Optic Transceiver

<b>Connector</b>	LC Fiber Optic Connector
<b>Cabling</b>	Typically, OM4 or higher MMF LC fiber optic cabling, up to 100m on OM4, up to 70m on OM3
<b>Data Rates Supported</b>	25Gbps
<b>Compliance</b>	SFF-8472 and 8431, Hot pluggable SFP+ footprint
<b>Compatibility</b>	Intended for use with NVIDIA Mellanox ConnectX-6 DX Dual Port 10/25GbE NIC
<b>Wavelength</b>	850nm
<b>Kit Contents</b>	25GbE SFP28 Transceiver

[This transceiver only officially supports 25Gbps speed. It is not a multi-speed capable transceiver.](#)

#### HP 10GbE SFP+ SR/SW LC Fiber Optic Transceiver

<b>Connector</b>	LC Fiber Optic Connector
<b>Cabling</b>	Typically, OM4 or higher MMF LC fiber optic cabling, up to 300m on MMF
<b>Data Rates Supported</b>	10Gbps
<b>Compliance</b>	SFF-8472 and 8431, Hot pluggable SFP+ footprint
<b>Compatibility</b>	Intended for use with NVIDIA Mellanox ConnectX-6 DX Dual Port 10/25GbE NIC
<b>Wavelength</b>	850nm
<b>Kit Contents</b>	10GbE SFP+ Transceiver

[This transceiver only officially supports 10Gbps speed. It is not a multi-speed capable transceiver.](#)

#### Intel® X550-T2 2-Port 10GbE NIC

<b>Connector</b>	Dual-port RJ-45
<b>Cabling</b>	Cat5 (or higher) for 100Mbps Cat5e (or higher) for 1Gbps, 2.5Gbps, or 5Gbps Cat6 (or higher) for 10Gbps up to 55m Cat6a (or higher) for 10Gbps up to 100m
<b>Controller</b>	Intel® Ethernet Controller X550-AT2
<b>Network Transfer Rates Supported</b>	10GbE, 5GbE, 2.5GbE, 1GbE, 100MbE
<b>Data Path Width</b>	PCIe Gen3x4



### Technical Specifications - Networking and Communications

<b>Power Requirement</b>	3.9W at 100Mbps 5.5W at 1Gbps 11.2W at 10Gbps
<b>Operating Temperature</b>	32° to 131° F (0° to 55° C)
<b>Dimensions (HxW)</b>	167 mm x 69 mm
<b>Operating System Driver</b>	Windows 11 64-Bit Linux®
<b>Management Capabilities</b>	DMI 2.0 Support, Windows Management Instrumentation (WMI) and SNMP, Multi-mode I/O Virtualization, VxLAN, VMDq, VLAN support with VLAN tag insertion
<b>Kit Contents</b>	<ul style="list-style-type: none"><li>• Intel® X550-T2 2-Port 10GbE NIC with standard height bracket attached</li><li>• Low-profile bracket</li><li>• Product Literature</li></ul>

The Intel® X550-T2 NIC cannot support MSC (modern standby) / S4 / S5 wake. HP suggests customers can use Onboard Lan RDP wake to replace MSC Wake.

#### Allied Telesis AT2911Ta/2-901 Dual Port 1GbE NIC

<b>Connector</b>	2 x RJ-45 (Dual Port)
<b>Cabling</b>	Cat3 (or higher) for 10Mbps Cat5 (or higher) for 100Mbps Cat5e (or higher) for 1Gbps up to 100m
<b>Memory</b>	17 Rx and 16 Tx queues
<b>Network Transfer Rates</b>	10/100/1000 Mbps
<b>Supported</b>	
<b>Compliance</b>	IEEE 802.1p (Quality of Service), IEEE 802.1Q (VLANs), IEEE 802.2 (LLC), IEEE 802.3ac (MAC), IEEE 802.3x (Flow control auto-negotiation), IEEE 802.3z (1000 Base-X), IEEE 802.3ad (Link aggregation), IEEE 802.3ab (10/100/1000T) RoHS, UL, FCC/EN55022 Class A, TUV, EN55024, CE, C-TICK, VCCI
<b>Bus Architecture</b>	PCIe 2x1
<b>Data Transfer Mode</b>	PCIe-based interface



### Technical Specifications - Networking and Communications

<b>Power Requirement</b>	2.4 Watts (typical)
<b>Management Capabilities</b>	VLAN support, Link aggregation LACP, Link aggregation smart switch, Failover, Smart Load Balancing (SLB), iSCSI boot support, Windows Management Instrumentation (WMI), PXE 2.1, SNMP
<b>Kit Contents</b>	Allied Telesis AT-2911Ta/2-901 Dual Port 1GbE NIC with low-profile bracket attached and standard bracket included

The AT2911T/2-9 NIC cannot support MSC (modern standby) wake. HP suggests customers use Onboard Lan RDP wake to replace MSC Wake.

#### HP Flex 1GbE Fiber LC Single Port

<b>Connector</b>	LC Fiber (Single Port)
<b>Cabling</b>	LC Fiber Cabling
<b>Controller</b>	AT-29M2
<b>Network Transfer Rates Supported</b>	1GBASE-SX
<b>Power Requirement</b>	Up to 3.3 Watts
<b>Bus Architecture</b>	USB 3.1G1
<b>Network Transfer Mode</b>	1GBASE-SX
<b>Network Transfer Rate</b>	1GBASE-SX
<b>Management Capabilities</b>	PXE, Wake on LAN, Digital Diagnostic Monitoring
<b>Kit Contents</b>	HP 1GbE Fiber LC Single Flex Port NIC

#### HP 2.5GbE Flex Port

<b>Connector</b>	RJ-45
<b>Cabling</b>	Cat6 or better up to 100 meters
<b>Controller</b>	Intel® I226-V
<b>Memory</b>	4 Tx and 4 Rx Queues, Jumbo Frames up to 9KB and without TSN
<b>Network Transfer Rates Supported</b>	10/100/1000Mbps and 2.5Gbps BASE-T
<b>Compliance</b>	IEEE 802.3, 802.3u (auto-negotiation), 802.3ab, 1588, 802.1AS-Rev, 802.1Qav, 802.1Qbu, 802.1Qbv, 802.3br, 802.3az



### Technical Specifications - Networking and Communications

<b>Power Requirement</b>	1.5 Watts (Typical)
<b>Bus Architecture</b>	PCIe Gen2x1
<b>Data Transfer Mode</b>	PCIe-based interface for active state operation (S0 state) and SMBus for host and management traffic (Sx low power state)
<b>Network Transfer Mode</b>	Automatic link configuration for speed duplex and flow control
<b>Network Transfer Rate</b>	2500BASE-T 1000BASE-T 100BASE-TX (Half-duplex supported) 10BASE-Te (Half-duplex supported)
<b>Management Capabilities</b>	WOL, PXE, UEFI, Error Correcting Memory in packet buffers, UDP/TCP/IP Checksum Offload, SCTP receive and transmit integrity offload
<b>Kit Contents</b>	HP 2.5GbE LAN Flex Port Networking Interface Card

#### 10GBase-T Flex IO v2

<b>Connector</b>	RJ-45
<b>Cabling</b>	Cat 6 or better for 10G, up to 100 meters
<b>Controller</b>	Realtek RTL8127
<b>Network Transfer Rates Supported</b>	10/100/1000Mbps and 2.5G/5G/10Gbps
<b>Compliance</b>	IEEE 1588 V1 and V2, IEEE 802.1AS, 802.3, 802.3az-2010, 802.3ab, 802.3u, 802.3bz, 802.1P, 802.1Q, 802.1ad
<b>Power Requirement</b>	3W
<b>Bus Architecture</b>	PCIe
<b>Network Transfer Mode</b>	10/100/1000M and 2.5G/5G/10G
<b>Network Transfer Rate</b>	10/100/1000M and 2.5G/5G/10G
<b>Management Capabilities</b>	WOL, PXE, UEFI
<b>Kit Contents</b>	10GBase-T Flex IO Module



### Technical Specifications - Networking and Communications

#### Broadcom 5720 Dual Port 1GbE RJ45 PCIe Ethernet Network Adaptor

<b>Connector</b>	RJ-45
<b>Cabling</b>	Cat 5 or better, up to 100 meters
<b>Controller</b>	BCM5720
<b>Network Transfer Rates Supported</b>	10/100/1000Mbps
<b>Compliance</b>	IEEE 802.3ab, 802.3az-2010, 802.3x, 802.1q,
<b>Power Requirement</b>	2.3 Watts (maximum)
<b>Bus Architecture</b>	PCIe Gen2x1
<b>Network Transfer Rate</b>	10/100/1000Mbps
<b>Management Capabilities</b>	PXE, WOL
<b>Kit Contents</b>	BCM5720-2P adapter with full height bracket installed and half height bracket included

#### HP Dual Port 10GBase-T NIC Module G2

<b>Connector</b>	2 x RJ-45 (Dual Port)
<b>Cabling</b>	Cat 6a or better for 10G, up to 100 meters
<b>Controller</b>	2 x Marvell AQC113
<b>Memory</b>	128KB Tx Buffer, 192KB Rx Buffer on-chip
<b>Network Transfer Rates Supported</b>	10/100/1000 Mbps and 2.5/5/10 Gbps
<b>Compliance</b>	IEEE 802.3 - 2018, 802.1AS-2011
<b>Power Requirement</b>	7 Watts
<b>Bus Architecture</b>	PCI Express and SMBus
<b>Data Transfer Mode</b>	PCIe-based interface for active state operation (S0 state) and SMBus for host and management traffic
<b>Network Transfer Mode</b>	Full-duplex
<b>Network Transfer Rate</b>	10GBASE-T 5GBASE-T 2.5GBASE-T 1000BASE-T 100BASE-TX 10BASE-TE



### Technical Specifications - Networking and Communications

<b>Management Capabilities</b>	WOL, PXE, UEFI,
<b>Kit Contents</b>	HP 10GBase-T G2 Dual Port NIC Network Header Connector Cable Installation Instructions
<b>AT-2914SX/LC PCIe Fiber Adaptor</b>	
<b>Connector</b>	LC Fiber (Single Port)
<b>Cabling</b>	50/125 µm (core/cladding) multimode fiber optic cable up to 500m 62.5/125 µm (core/cladding) multimode fiber optic cable up to 220m
<b>Controller</b>	BCM57762
<b>Network Transfer Rates Supported</b>	1000SX (1GbE Fiber at 850nm Wavelength)
<b>Compliance</b>	IEEE 802.1p (Quality of Service), IEEE 802.1Q (VLANs), IEEE 802.2 (LLC), IEEE 802.3ac (MAC), IEEE 802.3x (Flow control auto-negotiation), IEEE 802.3z (1000 Base-X), IEEE 802.3ad (Link aggregation) RoHS, UL, FCC/EN55022 Class A, TUV, EN55024, CE, C-TICK, VCCI
<b>Power Requirement</b>	1.5 Watts (typical)
<b>Bus Architecture</b>	PCIe x1
<b>Data Transfer Mode</b>	PCIe
<b>Network Transfer Mode</b>	1000SX only (1GbE Fiber at 850nm Wavelength)
<b>Network Transfer Rate</b>	1000SX only (1GbE Fiber at 850nm Wavelength)
<b>Management Capabilities</b>	UEFI, Smart Load Balancing and failover, Link aggregation (IEEE802.3ad), Generic trunking (FEC/GEC) / IEEE 802.3ad-draft static, VLAN Support, PXE
<b>Kit Contents</b>	Allied Telesis AT-2914SX/LC 1GB LC Fiber NIC with low-profile bracket attached and standard height bracket included

### HP 10/25GbE SFP28 Fiber Network Module

<b>Connector</b>	SFP28 Cages
<b>Cabling</b>	Dependent on transceiver, LC Fiber OM4 or better is recommended
<b>Controller</b>	Intel E810-XXVAM2
<b>Network Transfer Rates Supported</b>	25Gbps/10Gbps/1Gbps per port



### Technical Specifications - Networking and Communications

<b>Compliance</b>	IEEE 1588, SFP28
<b>Power Requirement</b>	13 Watts
<b>Bus Architecture</b>	PCIe Gen 4
<b>Data Transfer Mode</b>	DACS: 25GBASE-CR (802.3by 25Gb Twinax), SFP+ Twinax, 10GBASE-SR, Optics and AOCs: 25GBASE-SR, 25GBASE-LR, 10GBASE-LR
<b>Network Transfer Rate</b>	25Gbps/10Gbps/1Gbps per port
<b>Kit Contents</b>	HP 10/25GbE SFP28 Fiber Network Module

Transceivers sold separately. Please select the appropriate transceiver speed for intended application.

#### Intel E810-CQDA2 1x100GbE/2x50GbE QSFP28 PCIe Network Adapter

<b>Connector</b>	QSFP28
<b>Cabling</b>	Dependent on installed transceiver
<b>Controller</b>	Intel E810-CAM
<b>Network Transfer Rates</b>	
<b>Supported</b>	100/50/25/10GbE per port (Maximum of 100Gbps total across both ports)
<b>Compliance</b>	IEEE 1588
<b>Power Requirement</b>	21 Watts Typical (27 Watt Max)
<b>Bus Architecture</b>	PCIe Gen4x16
	DACS: IEEE 100GBASE-CR2/CR4, 50GBASE-CR/CR2, 25G/50G Consortium, 25GBASE-CR (CA-N, CA-S, CA-L), SFP+ 10GbE DAC
	Optics and AOCs: CAUI-4, 100GAUI-2/4, IEEE 50GAUI-1/2, IEEE LAUI-2, 25GBASE-SR/LR, 10GBASE-SR/LR
<b>Data Transfer Mode</b>	10GBASE-SR/LR
<b>Network Transfer Rate</b>	100/50/25/10GbE per port (Maximum of 100Gbps total across both ports)
<b>Kit Contents</b>	Intel E810-CQDA2 PCIe Network Adapter

Transceivers not included. Please select the appropriate transceiver speed for intended application.

#### HP MT7925 Wi-Fi 7 +Bluetooth® 5.4 WLAN with External Antenna

<b>WLAN Standards</b>	802.11a/b/g/n/ac/ax/be compliant
<b>Antenna</b>	External dipole antenna with 3 foot cable
<b>Bluetooth Standards</b>	5.4



### *Technical Specifications - Networking and Communications*

<b>Operating Temperature</b>	Same as system
<b>Interface</b>	M.2 Controller communicates with host via PCIe slot and internal USB cable
<b>Dimensions</b>	PCIe Carrier with Controller - 3.5" x 2.25" (8.9cm x 5.7cm) Antenna - 2.5" x 2.5" base (6.4cm x 6.4cm), 5" tall (12.7cm)
<b>Kit Contents</b>	MT7925 M.2 Wi-Fi Controller installed in PCIe carrier card, external antenna, and internal USB cable

#### **HP Flex IO MT7925 Wi-Fi 7 +Bluetooth® 5.4 WLAN with Integrated Antenna**

<b>WLAN Standards</b>	802.11a/b/g/n/ac/ax/be compliant
<b>Antenna</b>	Dipole antenna integrated into system chassis
<b>Bluetooth Standards</b>	5.4
<b>Operating Temperature</b>	Same as system
<b>Interface</b>	M.2 Controller communicates with host via PCIe and USB in the Flex IO connector
<b>Dimensions</b>	1.5" x 1.5" (3.8cm x 3.8cm)
<b>Kit Contents</b>	MT7925 M.2 Wi-Fi Controller installed in Flex IO carrier card, integrated antenna installed in chassis

Available CTO only.



### Technical Specifications - Weights and Dimensions

#### WEIGHTS & DIMENSIONS-Packaging

<b>Packaging (WxDxH)</b>	<b>EPE:</b> 12.32 x 23.35 x 24.02 in (313 x 593 x 610 mm ) <b>MPP:</b> 12.32 x 23.35 x 24.02 in (313 x 593 x 610 mm)
<b>Shipping Weight</b>	<b>EPE:</b> 42.58 lb (19.33 kg) <b>MPP:</b> 44.69 lb (20.29 kg)
<b>Palletization Profile</b>	6 units per layer 3 layers max 18 units per pallet 1200 x 1000 x 1960 mm (pallet included)



### Change Log

#### SUMMARY OF CHANGES

Date of change	Version History		Description of change
May 4, 2026	From v1 to v2	Update	General update
June 10, 2026	From v2 to v3	Update	Optical and removal storage section updated

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