HP Z2 SFF G9 Workstation Desktop PC

Full size Z tower power at half the size



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

Full height, full length performance

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

Configurable for today. Expandable for tomorrow.

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

Industry leading security. Reliability you can trust.

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

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Operating Systems
Support your unique user needs with a choice of Windows 11 Pro, WSL2 or Linux® operating systems.[4]

Intel® Core™ Processors[5]
Bring your ideas to life quickly and run multiple apps simultaneously with the latest Intel® Core™ vPro®[6] processors. For added performance, choose the K-Series.

Professional Graphics
Design, real-time ray trace and simulate with up to NVIDIA RTX A4000 and AMD Radeon Pro X graphics with PCIe G4 high speed bandwidth.[7]

Memory
Experience fast performance when working on complex design tasks with 4 DIMMs for up to 128GB DDR5 memory at an increased memory speed of up to 4400MHz.[8]

Storage
Simplify your storage with up to 36TB with 3x M.2 storage slots and RAID for added performance and reliability.[9]

Flexible I/O Module
Configure to the needs of today and tomorrow. Experience flexible I/O modules with multiple options for customers to choose from, including DP 1.4, VGA, HDMI, Dual USB Type-A, USB Type-C® with Alt-DP or 2nd Serial and more.[10]

Custom Performance Modes
Custom tune your PC to ensure peak performance for your heaviest workloads. Now you're ready to take on any task.

Tool-less Access
Evolve your work. Evolve your rig. With tool-less access to the interior, you can customize your Z to fit your needs.

Network Connectivity
Get fast network connectivity with 10Gb Ethernet interface.

HP Wolf Security
HP Wolf Security for Business creates a hardware-enforced, always-on, resilient defense. From the BIOS to the browser, above, in, and below the OS, these constantly evolving solutions help protect your PC from modern threats.[11]

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

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

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Specifications Table

Available Operating Systems	Windows 11 Pro[1] Windows 11 Home – HP recommends Windows 11 Pro for business[1] Linux® Ready[3] Ubuntu 20.04 LTS[27]
Processor family[4]	13th Generation Intel® Core™ i9 processor; 13th Generation Intel® Core™ i7 processor; 13th Generation Intel® Core™ i5 processor; 13th Generation Intel® Core™ i3 processor; 12th Generation Intel® Core™ i9 processor; 12th Generation Intel® Core™ i7 processor; 12th Generation Intel® Core™ i5 processor; 12th Generation Intel® Core™ i3 processor
Available Processors	Intel® Core™ i5-12400 with Intel® UHD Graphics (2.5 GHz P-core base frequency, up to 4.4 GHz P-core Max Turbo frequency, 18 MB L3 cache, 6 P-cores, 12 threads) Intel® Core™ i3-12300 with Intel® UHD Graphics (3.5 GHz P-core base frequency, up to 4.4 GHz P-core Max Turbo frequency, 12 MB L3 cache, 4 P-cores, 8 threads) Intel® Core™ i3-12100 with Intel® UHD Graphics (3.3 GHz P-core base frequency, up to 4.3 GHz P-core Max Turbo frequency, 12 MB L3 cache, 4 P-cores, 8 threads) Intel® Core™ i5-12600K with Intel® UHD Graphics (2.8 GHz E-core base frequency, 3.7 GHz P-core base frequency, up to 3.6 GHz E-core Max Turbo frequency, up to 4.9 GHz P-core Max Turbo frequency, 20 MB L3 cache, 6 P-cores and 4 E-cores, 16 threads) Intel® Core™ i5-12600 with Intel® UHD Graphics (3.3 GHz P-core base frequency, up to 4.8 GHz P-core Max Turbo frequency, 18 MB L3 cache, 6 P-cores, 12 threads) Intel® Core™ i5-12500 with Intel® UHD Graphics (3.0 GHz P-core base frequency, up to 4.6 GHz P-core Max Turbo frequency, 18 MB L3 cache, 6 P-cores, 12 threads) Intel® Core™ i9-12900 with Intel® UHD Graphics (1.8 GHz E-core base frequency, 2.4 GHz P-core base frequency, up to 3.8 GHz E-core Max Turbo frequency, up to 5.0 GHz P-core Max Turbo frequency, up to 5.1 GHz with Intel® Turbo Boost Technology, 30 MB L3 cache, 8 P-cores and 8 E-cores, 24 threads) Intel® Core™ i9-12900K with Intel® UHD Graphics (2.4 GHz E-core base frequency, 3.2 GHz P-core base frequency, up to 3.9 GHz E-core Max Turbo frequency, up to 5.2 GHz P-core Max Turbo frequency, 30 MB L3 cache, 8 P-cores and 8 E-core, 24 threads) Intel® Core™ i7-12700K with Intel® UHD Graphics (2.7 GHz E-core base frequency, 3.6 GHz P-core base frequency, up to 3.8 GHz E-core Max Turbo frequency, up to 5.0 GHz P-core Max Turbo frequency, 25 MB L3 cache, 8 P-cores and 4 E-core, 20 threads) Intel® Core™ i7-12700 with Intel® UHD Graphics (1.6 GHz E-core base frequency, 2.1 GHz P-core base frequency, up to 3.6 GHz E-core Max Turbo frequency, up to 4.8 GHz P-core Max Turbo frequency, up to 4.9 GHz with Intel® Turbo Boost Technology, 25 MB L3 cache, 8 P-cores and 4 E-cores, 20 threads) Intel® Core™ i5-13400 (1.8 GHz E-core base frequency, 2.5 GHz P-core base frequency, up to 3.3 GHz E-core Max Turbo frequency, up to 4.6 GHz P-core Max Turbo frequency, 20 MB L3 cache, 6 P-cores and 4 E-cores, 16 threads) Intel® Core™ i5-13500 (1.8 GHz E-core base frequency, 2.5 GHz P-core base frequency, up to 3.5 GHz E-core Max Turbo frequency, up to 4.8 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads) Intel® Core™ i5-13600 (2.0 GHz E-core base frequency, 2.7 GHz P-core base frequency, up to 3.7 GHz E-core Max Turbo frequency, up to 5.0 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads) Intel® Core™ i5-13600K (2.6 GHz E-core base frequency, 3.5 GHz P-core base frequency, up to 3.9 GHz E-core Max Turbo frequency, up to 5.1 GHz P-core Max Turbo frequency, 24 MB L3 cache, 6 P-cores and 8 E-cores, 20 threads) Intel® Core™ i7-13700 (1.5 GHz E-core base frequency, 2.1 GHz P-core base frequency, up to 4.1 GHz E-core Max Turbo frequency, up to 5.1 GHz P-core Max Turbo frequency, 30 MB L3 cache, 8 P-cores and 8 E-cores, 24 threads) Intel® Core™ i7-13700K (2.5 GHz E-core base frequency, 3.4 GHz P-core base frequency, up to 4.2 GHz E-core Max Turbo frequency, up to 5.3 GHz P-core Max Turbo frequency, 30 MB L3 cache, 8 P-cores and 8 E-cores, 24 threads) Intel® Core™ i9-13900 (1.5 GHz E-core base frequency, 2.0 GHz P-core base frequency, up to 4.2 GHz E-core Max Turbo frequency, up to 5.2 GHz P-core Max Turbo frequency, 36 MB L3 cache, 8 P-cores and 16 E-cores, 32 threads) Intel® Core™ i9-13900K (2.2 GHz E-core base frequency, 3.0 GHz P-core base frequency, up to 4.3 GHz E-core Max Turbo frequency, up to 5.4 GHz P-core Max Turbo frequency, 36 MB L3 cache, 8 P-cores and 16 E-cores, 32 threads)
Maximum memory	128 GB DDR5-4400 non-ECC SDRAM; 128 GB DDR5-4400 ECC SDRAM [32] Transfer rates up to 4400 MT/s.
Internal storage	500 GB up to 2 TB 7200 rpm SATA HDD[7] 1 TB up to 12 TB 7200 rpm Enterprise SATA HDD[7] up to 500 GB 7200 rpm SED HDD[7] 512 GB up to 4 TB HP Z Turbo Drive PCIe® NVMe™ TLC M.2 SSD[7] 512 GB up to 4 TB HP Z Turbo Drive PCIe® NVMe™ SED Opal 2 TLC M.2 SSD[7] 256 GB up to 1 TB PCIe® NVMe™ Value M.2 SSD[7] 500 GB up to 2 TB CRU SHIPS Removable NVMe™ Module[7]
Optical drive	HP Slim DVD-ROM; HP Slim DVD-Writer [11,12]
Available Graphics	Integrated: Intel® UHD Graphics 770 Entry 3D: AMD Radeon™ Pro WX 3200 (4 GB GDDR5 dedicated) NVIDIA® T400 4 GB[30] Mid-range 3D: NVIDIA® T1000 (8 GB GDDR6 dedicated) AMD Radeon™ Pro W6600 (8 GB GDDR6 dedicated) NVIDIA® T1000 (4 GB GDDR6 dedicated) NVIDIA RTX™ A2000 (6 GB GDDR6 dedicated) NVIDIA RTX™ A2000 12GB High-end 3D: NVIDIA RTX™ A4000 (16 GB GDDR6 dedicated) AMD Radeon™ RX 6400 Graphics (4 GB GDDR6 dedicated) AMD Radeon™ RX 6700 XT Graphics (12 GB GDDR6 dedicated)
Audio	Realtek ALC3252
Expansion slots	1 half-height PCIe 4 x16; 1 half-height PCIe 3 x4; 1 half-height PCIe 3 x4 (x16 connector); 1 half-height PCIe 3 x1; 1 full-height PCIe 4 x16; 1 full-height PCIe 4 x16 (x16 connector) (1 M.2 2230 slot for WLAN and 3 M.2 2280 slots for storage)
Ports and connectors	Front: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 4 SuperSpeed USB Type-A 10Gbps signaling rate (1 charging); 1 universal audio jack ; Rear: 1 audio-in; 1 audio-out; 1 RJ-45; 2 DisplayPort™ 1.4; 2 SuperSpeed USB Type-A 10Gbps signaling rate; 1 SuperSpeed USB Type-A 5Gbps signaling rate; 3 USB Type-A 480Mbps signaling rate ; Optional Ports: Flex IO – choose one of the following options: 1 DisplayPort™ 1.4, 1 HDMI 2.0b, 1 VGA,1 2nd 1GbE LAN, 1 Dual SuperSpeed USB Type-A 5Gbps signaling rate,1 SuperSpeed USB Type-C® 10Gbps signaling rate (15W USB Power Delivery, Alt Mode DisplayPort™) 1 Thunderbolt™ 3 with SuperSpeed USB4 Type-C® 40Gbps signaling rate (cabled to PCIe® AIC); Flex IO Rear – choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (1 charging), 2 SuperSpeed USB Type-A 5Gbps signaling rate, 1 serial; Flex IO Front – choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (1 charging), 1 SD 4.0 card reader; Flex IO Front – choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (1 charging), 1 SD 4.0 card reader. Flex IO – choose one of the following options: 1 DisplayPort™ 1.4, 1 HDMI 2.0b, 1 VGA, 1 2nd 1GbE LAN, 1 Dual SuperSpeed USB Type-A 5Gbps signaling rate, 1 SuperSpeed USB Type-C® 10Gbps signaling rate (15W USB Power Delivery, Alt Mode DisplayPort™), 1 Thunderbolt™ 3 with SuperSpeed USB4 Type-C® 40Gbps signaling rate (cabled to PCIe® AIC). Front: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (charging), 1 SD card reader. Flex IO Rear: choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (charging), 2 SuperSpeed USB Type-A 5Gbps signaling rate, 1 serial. Flex IO Front : choose one of the following options: 1 SuperSpeed USB Type-C® 20Gbps signaling rate (charging), 1 SD 4.0 card reader[8]

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Specifications Table

Keyboard	HP Wired Desktop 320K keyboard; HP Wired Desktop 320MK Mouse and Keyboard; HP 125 Wired Keyboard; HP 655 Wireless Keyboard and mouse combo; HP 975 Wireless Keyboard; HP 455 Programmable Wireless Keyboard[9]
Mouse	HP Wired Desktop 320M mouse; HP wired desktop 128 laser mouse; HP 125 Wired Mouse; HP Creator 935 Black Wireless Mouse[9]
Communications	LAN:Intel® Ethernet Network Adapter I225-T1; Integrated Intel® I219-LM GbE; Intel® I350-T2 dual-port GbE NIC; Intel® I225-LM 2.5 GbE LOM, non-vPro®; Intel® X550-T2 dual-port 10GbE NIC; NVIDIA® Mellanox ConnectX-6 DX Dual Port 10/25GbE SFP28 NIC; WLAN:Intel® Wi-Fi 6E AX211 (2x2) and Bluetooth® 5.3 wireless card with external antenna; Intel® Wi-Fi 6 AX211 (2x2) and Bluetooth® 5.3 wireless card with internal antenna[28];
Drive Bays	External: One 3.5" HDD; One slim ODD; Internal: One 2.5" HDD; One 3.5" HDD; Three M.2 NVME 2280 SSD
Software[15,16,17]	HP PC Hardware Diagnostics UEFI HP Support Assistant HP PC Hardware Diagnostics Windows ZCentral Remote Boost HP Image Assistant HP Manageability Integration Kit Performance Advisor 3.0
Security management[19,20,21,22,23,24,25,26,31]	HP Secure Erase HP Sure Click HP BIOSphere Gen6 HP Sure Admin Hood Sensor Optional Kit HP Client Security Manager Gen6 HP Sure Start Gen7 HP Sure Recover Gen4 HP Sure Sense Gen2 HP Sure Run Gen5
Security Software Licenses	HP Wolf Pro Security Edition[56]
Management features	HP Driver Packs; HP Management Integration Kit for Microsoft System Center Configuration Management Gen4; HP System Software Manager (download); HP BIOS Configuration Utility (download)[18]
Power	260 W 92% efficient, wide-ranging, active PFC; 550 W 92% efficient, wide-ranging, active PFC; 450 W 90% efficient, wide-ranging, active PFC[10]
Dimensions	38.4 x 30.8 x 10 cm; (Standard desktop orientation.); 3.95 x 15.1 x 12.1 in 10 x 38.4 x 30.8 cm (Package)
Weight	Starting at 5.0 kg; (Exact weights depend upon configuration (System weight only))
Ecolabels	IT ECO Declaration; TCO Certified configurations available; EPEAT® Gold registered in the U.S.[13]
Energy star certified	ENERGY STAR® certified
Sustainable impact specifications	Ocean-bound plastic in speaker enclosure; 45% post-consumer recycled plastic; 25% ITE-derived closed loop plastic; Bulk packaging available; 80 Plus® Gold power supplies available; Molded paper pulp cushion inside box is 100% sustainably sourced and recyclable; Ocean-bound plastic in speaker enclosure and system fan; Contains recycled metal
Compatible displays	All HP Z Displays and HP DreamColor Displays are supported. For more information see www.hp.com/go/zdisplays (Supports 8 displays, driving 8 displays requires the use of integrated and discrete graphics ports. Each source can drive a total of 4 displays. At least one of the integrated graphics ports need to drive two displays in a daisy chain configuration.)

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Accessories and services (not included)

HP Z Turbo Drive 2TB TLC Z8 G4 SSD Kit



Super charge your productivity and creativity and deliver optimized HP Workstation workflows with the HP Z Turbo Drive G2 PCIe SSD, which delivers four times the read performance of traditional SSDs at a cost that’s remarkably similar.
Product number: 201F8AA

HP 975 Dual-Mode Wireless Keyboard



Now you can make your keyboard truly yours while enjoying an elevated typing experience. That's because you can connect up to 3 devices either via Bluetooth® or USB-A. We've also included many must-have features like comfortable, quiet, soft return keys, 20+ of which can be programmed with shortcuts, controllable smart backlight, and a long life, rechargeable battery.
Product number: 3Z726AA

NVIDIA RTX A2000 12 GB 4mDP Graphics



Product number: 5Z7D9AA

Allied Telesis AT-2911T/2-901 Dual Port 1GbE NIC



Product number: 6E3Y9AA

HP Keyed Cable Lock 10 mm



Help keep your notebook safe in the office and high-traffic areas by tethering it to a secure surface with the HP Master Keyed Cable Lock 10mm, designed specifically for ultra-thin profile notebooks.
Product number: T1A62AA

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Messaging Footnotes

[1] HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features and OS requirement.
[2] MIL STD testing is not intended to demonstrate fitness for U.S. Department of Defense contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental Damage or damage under these test conditions requires an optional HP Accidental Damage Protection Care Pack.
[3] Third party software sold separately.
[4] 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 Pro 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.
[5] 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.
[6] For full Intel® vPro® functionality, Windows 10 Pro 64 bit, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or WLAN card and TPM 2.0 are required. Some functionality requires additional 3rd party software in order to run. See http://intel.com/vpro
[7] Sold separately or as an optional feature.
[8] Gen over gen.
[9] For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36GB of system disk (for Windows 11) is reserved for system recovery software.
[10] Optional features that must be configured at purchase or are sold separately.
[11] HP Wolf Security for Business requires Windows 10 or higher, includes various HP security features and is available on HP Pro, Elite, RPOS and Workstation products. See product details for included security features and OS requirement.

Technical Specifications Footnotes

[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 is automatically updated and enabled. High speed internet and Microsoft account required. ISP fees may apply and additional requirements may apply over time for updates. See http://www.windows.com .
[3] For detailed OS/hardware support information for Linux, see: http://www.hp.com/support/linux_hardware_matrix .
[4] Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
[5] For full Intel® vPro™ functionality, Windows 11 Pro 64 bit, a vPro supported processor, vPro enabled chipset, vPro enabled wired LAN and/or WLAN card and TPM 2.0 are required. Some functionality requires additional 3rd party software in order to run. See http://intel.com/vpro .
[6] Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See http://www.intel.com/technology/turboboost for more information.
[7] For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36GB of system disk (for Windows 11) is reserved for system recovery software.
[8] Flex IO port and one PCIe slot will be occupied when Thunderbolt is installed. About Thunderbolt compatibility, please refer to the FAQ of Thunderbolt community. https://www.thunderbolttechnology.net/tech/faq .
[9] Keyboard and Mouse are optional or add on features.
[10] Specific chassis required for 550 W 92% efficient, wide-ranging, active PFC power supply.
[11] Duplication of copyrighted material is strictly prohibited. Actual speeds may vary. Double Layer media compatibility will widely vary with some home DVD players and DVD-ROM drives. Note that DVD-RAM cannot read or write to 2.6GB Single Sided/5.2 Double Sided-Version 1.0 Media.
[12] With Blu-Ray, certain disc, digital connection, compatibility and/or performance issues may arise, and do not constitute defects in the product. Flawless playback on all systems is not guaranteed. In order for some Blu-ray titles to play, they may require a DVI or HDMI digital connection and your display may require HDCP support. HD-DVD movies cannot be played on this Desktop PC.
[13] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.
[15] HP ZCentral Remote Boost does not come preinstalled on Z Workstations but can be downloaded and run on all Z desktop and laptops without license purchase. With non-Z sender devices, purchase of perpetual individual license or perpetual floating license per simultaneously executing versions and purchase of ZCentral Remote Boost Software Support is required. RGS requires Windows, RHEL (7 or 8), UBUNTU 18.04 LTS, or HP ThinPro 7operating systems. MacOS (10.13 or newer) operating system is only supported on the receiver side. Requires network access. The software is available for download at hp.com/ZCentralRemoteBoost .
[16] HP Performance Advisor Software - HP Performance Advisor is ready and waiting to help you get the most out of your HP Workstation from day one—and every day after. Learn more or download at: https://www8.hp.com/us/en/workstations/performance-advisor.html
[17] HP Support Assistant requires Windows and Internet access.
[18] HP Manageability Integration Kit can be downloaded from http://www8.hp.com/us/en/ads/clientmanagement/overview.html
[19] HP Client Security Manager Gen7 requires Windows and is available on the select HP PCs.
[20] HP BIOSphere Gen6 features may vary depending on the platform and configurations.
[21] HP Sure Click requires Windows 10 Pro or higher or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.
[22] HP Sure Start Gen7 is available on select HP PCs and workstations. See product specifications for availability.
[23] HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.
[24] HP Sure Recover Gen4 is available on select HP PCs and requires an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.
[25] HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88 "Clear" sanitation method. HP Secure Erase does not support platforms with Intel® Optane™.
[26] HP Sure Sense requires Windows 11 Pro or Enterprise and supports Microsoft Internet Explorer, Google Chrome™, and Chromium™. Supported attachments include Microsoft Office (Word, Excel, PowerPoint) and PDF files in read only mode, when Microsoft Office or Adobe Acrobat are installed.
[27] A certified preloaded version of Ubuntu® 20.04 LTS is available from HP for this platform.
[28] Wireless access point and Internet service required and sold separately. Availability of public wireless access points limited. Wi-Fi 6 (802.11ax) is backwards compatible with prior 802.11 specs.
[29] When slot 2 is configured with a PCIe card, slot 1 will automatically downgrade to PCIe x8 electrical.
[30] NVIDIA® T400 (2 GB GDDR6 dedicated) may go End of Life in late 2022.
[31] HP Sure Admin requires Windows 10 or higher, HP BIOS, HP Manageability Integration Kit from http://www.hp.com/go/clientmanagement and HP Sure Admin Local Access Authenticator smartphone app from the Android or Apple store.
[32] Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed.
[56] HP Wolf Pro Security Edition (including HP Sure Click Pro and HP Sure Sense Pro) is available preloaded on select SKUs and, depending on the HP product purchased, includes a paid 1-year or 3-year license. 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 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 (HP Sure Sense Pro and HP Sure Click Pro) is effective upon activation and will continue for either a twelve (12) month or thirty-six (36) month license term ("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.

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