Data sheet

HP ZCentral 4R Workstation

Our most powerful 1U rack workstation.

For the first time ever, get Z performance in a high-density 1U footprint. This slim powerhouse lets you pack more units—and power—into your data closet. Perfect for use with HP ZCentral, our single-source remote workstation solution frees power users to work from anywhere.[1]



*Product image may differ from actual product

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Z4 Power. 1U Form Factor.

- We've packed the performance of our best-selling Z4 into a slim, 1U design. Power complex workflows while saving space with up to an 18-core Intel® Xeon® W processor[2], 256 GB quad-channel ECC memory and support for NVIDIA® Quadro® RTX 8000[3] graphics.

Create your own upgrade path.

- Invest only in the technology you need now, knowing you can scale over time. Get the ability to expand as the compute demands of your workforce evolve, with impressive memory capacity, space for multiple GPUs[4] and upgradable power supply options.

Cut costs, not performance. Centralize with Z.

- Maximize your compute investment by centralizing a suite of ZCentral 4Rs that can be accessed remotely across users. Plus, software certifications for leading apps come standard[5], delivering professional reliability and predictable licensing fees.

HP's most secure workstation.

- Advanced security features come standard on every ZCentral 4R. System safeguards like the industry's first self-healing BIOS help lock your device, data and identity down tight.[6]
- Get the performance and productivity you need to run demanding professional applications with up to an 18-core Intel® Xeon® W-series processor.[7]
- Boost your graphics power for peak performance with support for one ultra high-end or two mid-tier NVIDIA Quadro® professional graphics options.[8]
- Choose a power supply that can keep up. With an aggregated option—combining two power supplies—or a redundant option, you'll have power to keep you up and running.[8]
- Get greater application responsiveness to tackle large workloads with quad-channel architecture providing up to 256 GB of memory.
- Minimize how often you have to refresh your PC with a machine built for longevity. This workstation is with you for the long-term.
- Choose between Windows 10 Pro 64 or Linux® client operating systems. Whichever suits your needs best.[9]
- Multiple high-speed network connections are easy with dual embedded 1 x 10 GbE and 1 x 1GbE ports for speedy data transfers.
- Install pro-grade PCIe SSD storage hardware and enhance the performance of your storage-bound apps without sacrificing standard PCIe slots.
- We know you need performance you can rely on. That's why our products endure over 360,000 hours of rigorous testing and software certification.
- Upgrade quickly with tool-less access to multiple components including power supplies, fans, storage drives and memory. Expansion made easy for evolving technology needs.

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HP ZCentral 4R Workstation Specifications Table





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Available Operating Systems	Windows 11 Pro for Workstations[1,21] Windows 10 Pro for Workstations[1,21] Ubuntu 20.04[35] (HP Linux® Installer Kit includes drivers for 64-bit versions of Red Hat® Enterprise Linux® 7.6 and Ubuntu 18.04. Red Hat® Enterprise Linux® (1-year paper license only) is available as a second operating system.)
Processor family[30]	Intel® Xeon® W processor
Available Processors[2,3,29]	Intel® Xeon® W-2223 (3.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 8.25 MB L3 cache, 4 cores), supports Intel® vPro® Technology; Intel® Xeon® W-2225 (4.1 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 8.25 MB L3 cache, 4 cores), supports Intel® vPro® Technology; Intel® Xeon® W-2235 (3.8 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 8.25 MB L3 cache, 6 cores), supports Intel® vPro® Technology; Intel® Xeon® W-2245 (3.9 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 16.5 MB L3 cache, 8 cores), supports Intel® vPro® Technology; Intel® Xeon® W-2255 (3.7 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 19.25 MB L3 cache, 10 cores), supports Intel® vPro® Technology; Intel® Xeon® W-2275 (3.3 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 19.25 MB L3 cache, 14 cores), supports Intel® vPro® Technology; Intel® Xeon® W-2295 (3.0 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 24.75 MB L3 cache. 18 cores), supports Intel® vPro® Technology
Chipset	Intel® C422
Maximum memory	256 GB DDR4-2933 ECC SDRAM [7] Transfer rates up to 2933MT/s.
Memory slots	4 DIMM
Internal storage	1 TB up to 4 TB 7200 rpm SATA Enterprise[4] 256 GB up to 1 TB SATA SSD[4] 240 GB up to 1.92 TB SATA Enterprise SSD[4] 256 GB up to 2 TB HP Z Turbo Drive PCIe® NVMe™ SSD M.2[4] 256 GB up to 512 GB HP Z Turbo Drive PCIe® NVMe™ SED SSD M.2[4] 256 GB up to 512 GB HP Z Turbo Drive PCIe® NVMe™ SED Opal 2 M.2 SSD[4] 512 GB up to 2 TB HP Z Turbo Drive Dual Pro PCIe® SSD[4]
Available Graphics	Entry 3D: NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® T400 (2 GB GDDR6 dedicated); NVIDIA® T400 4 GB Mid-range 3D: NVIDIA® T1000 (4 GB GDDR6 dedicated); NVIDIA® P1000 (4 GB GDDR5 dedicated); NVIDIA RTX™ A2000 (6 GB GDDR6 dedicated); NVIDIA® T1000 (8 GB GDDR6 dedicated); NVIDIA RTX™ A2000 (12 GB GDDR6 dedicated) High-end 3D: NVIDIA® Quadro RTX™ 4000 (8 GB GDDR6 dedicated); NVIDIA RTX™ A4000 (16 GB GDDR6 dedicated); NVIDIA RTX™ A4500 (20 GB GDDR6 dedicated) Ultra High-end 3D: NVIDIA® Quadro RTX™ 5000 (16 GB GDDR6 dedicated); NVIDIA® RTX™ A5000 (24 GB GDDR6 dedicated); NVIDIA® RTX™ A6000 (48 GB GDDR6 dedicated)
Audio	Realtek HD ALC3601
Expansion slots	1 PCIe 3 x16; 2 M.2 PCIe 3 x4; 1 PCIe 3 x16 mechanical (x8 electrical); 1 PCIe 3 x8 mechanical (x8 electrical)
Ports and Connectors	Front: 1 headset connector; 4 SuperSpeed USB Type-A 5Gbps signaling rate (1 Charging) ; Rear: 4 SuperSpeed USB Type-A 5Gbps signaling rate; 1 RJ-45 (10 GbE); 1 RJ-45 (1 GbE) ; Optional Ports: Front Premium Version: 1 headset connector; 2 SuperSpeed USB Type-C® 10Gbps signaling rate (USB Power Delivery, DisplayPort™ 1.4, HP Sleep and Charge); 2 SuperSpeed USB Type-A 5Gbps signaling rate (1 charging)
Input devices	HP USB Business Slim Keyboard[10]; HP USB Black Wired Mouse[10];
Communications	LAN: Integrated Intel® I219-LM PCIe® GbE; Intel® I210-T1 PCIe® GbE; Intel® X550-T2 2-Port 10GbE NIC; Integrated Aquantia® AQC107 10GbE ;
Drive Bays	One 3.5"; Two 2.5" (select models); Two 2.5" [16]
Software	HP Performance Advisor; HP Support Assistant; HP ZCentral Remote Boost 2020; HP Sure Recover Gen3; [17,31,32,33]
Security management	Full volume encryption; HP Keyed Cable Lock Kit; HP Secure Erase; Kensington lock slot; Secure authentication; TPM 2.0 certified; HP Sure Click; HP MIK/SCCM Gen2; HP Sure Sense; HP Sure Start Gen6; HP BIOSphere Gen6; HP Client Security Manager Gen6;[15,18,19,22,24,25,28,34]
Power	675 W internal power supply, up to 90% efficiency, active PFC; Two 675 W internal redundant power supply, up to 90% efficiency, active PFC; Two 675 W internal aggregated power supply (total 1350W), up to 90% efficiency, active PFC
Dimensions	4.3 x 43.8 x 62.5 cm (without rack mounting ears); 4.3 x 48.7 x 64.6 cm (with front bezel)
Weight	Starting at 10.7 kg (without rack rails); Starting at 13.7 kg (with rack rails); (Exact weight depends on configuration.)
Ecolabels	ENERGY STAR® certified and EPEAT® registered configurations available[11]
Warranty	3 year (3-3-3) limited warranty and service offering includes 3 years of parts, labor and on-site repair. Terms and conditions vary by country. Certain restrictions and exclusions apply.

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Accessories and services (not included)

HP 5 year Next Business Day Onsite Hardware Support for Workstations



Receive 5 years of next business day onsite HW Support from an HP-qualified technician for your computing device, if the issue cannot be solved remotely.
Product number: U7944E

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Messaging Footnotes

[1] HP ZCentral Connect Software is a one-time software license purchase and requires download at hp.com/ZCentral. Not available until early 2020. Requires HP ZCentral Remote Boost which can be downloaded at hp.com/ZRemoteGraphicsSoftware, a Windows 10, Windows Server 2016 or newer operating system, Microsoft Active Directory and Intel Active Management Technology for select features. HP ZCentral Remote Boost does not come preinstalled on Z Workstations but can be downloaded and run on all Z desktop and laptops without an additional license purchase. When you purchase a Z device, you get an embedded license. With non-Z sender devices, it is a perpetual or floating license. ZCentral Remote Boost requires a Windows (10 or 7 SP2), RHEL (6, 7 or 8), UBUNTU 18.04 LTS, or HP ThinPro operating system. 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.
[2]Multicore is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. Performance and clock frequency will vary depending on application workload and your hardware and software configurations. Intel's numbering, branding and/or naming is not a measurement of higher performance.
[3]NVIDIA Quadro® RTX 8000 graphics is a configurable option.
[4]Support for one ultra high-end or two mid-tier NVIDIA® Quadro® professional graphics options.
[5]Select ISV certifications included. Software sold separately.
[6]Based on HP's unique and comprehensive security capabilities at no additional cost among desktop workstation vendors as of January 2017 on HP Desktop Workstations with 7th Gen and higher Intel® Processors.
[7] 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.
[8] Sold separately or as an optional feature.
[9] 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 10 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 .

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 10 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 .
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[3] For full Intel® vPro® functionality, Windows, a vPro® supported processor, vPro® enabled Q370 chipset or higher and vPro® enabled WLAN card are required. Some functionality, such as Intel Active management technology and Intel Virtualization technology, requires additional 3rd party software in order to run. Availability of future "virtual appliances" applications for Intel vPro technology is dependent on 3rd party software providers. Compatibility of this generation of Intel® vPro technology-based hardware with future "virtual appliances" is yet to be determined. Intel® vPro® is supported only with Intel® Xeon® configurations.
[4] For hard drives and solid state drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35 GB of system disk is reserved for system recovery software.
[5] 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. No support for DVD RAM.
[6] 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.
[7] 8GB, 16GB, 32GB, 64GB 2933MHz SDRAM are supported
[10] Optional or add-on feature.
[11] Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. EPEAT® status varies by country. Visit www.epeat.net for more information.
[12] External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen. (Note: optional low-halogen power cables are available for some countries in Europe)
[15] 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™.
[16] 3.5" drive bay can be configured with two 2.5" drives for a total of four 2.5" drives.
[17] HP Support Assistant: Requires Windows and Internet access.
[18] HP Keyed Cable Lock Kit is available only as an aftermarket option.
[19] HP Manageability Integration Kit can be downloaded from Http://www.hp.com/go/clientmanagement .
[20] I210-AT, I219-V are available in Intel® Xeon® configurations only.
[21] In accordance with Microsoft's support policy, HP does not support the Windows 8 or Windows 7 operating system on products configured with Intel and AMD 7th generation and forward processors or provide any Windows 8 or Windows 7 drivers on http://www.support.hp.com
[22] HP Sure Sense requires Windows Pro or Enterprise. See product specifications for availability.
[24] HP Sure Start Gen6 is available on select HP PCs.
[25] HP BIOSphere Gen6. Features may vary depending on the platform and configurations.
[28] HP Sure Click requires Windows Pro or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.
[29] Intel® Turbo Boost technology requires a PC with a processor with Intel Turbo Boost capability. Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See www.intel.com/technology/turboboost for more information.
[30] Your product does not support Windows 8 or Windows 7. In accordance with Microsoft's support policy, HP does not support the Windows® 8 or Windows 7 operating system on products configured with Intel® and AMD 7th generation and forward processors or provide any Windows® 8 or Windows 7 drivers on http://www.support.hp.com
[31] 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
[32] HP ZCentral Remote Boost Sender does not come preinstalled on Z Workstations but can be downloaded and run on all Z desktop and laptops without license purchase through 2022. 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. ZCentral Remote Boost Sender for non-Z Hardware requires a license and Windows 10, RHEL/CentOS (7 or 8), or UBUNTU 18.04 or 20.04 LTS operating systems. macOS (10.14 or newer) operating system and ThinPro 7.2 are only supported on the receiver side. Requires network access. The software is available for download at hp.com/ZCentralRemoteBoost.
[33] HP Sure Recover Gen3 is available on select HP PCs and requires an open network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.
[34] HP Client Security Manager Gen6 requires Windows.
[35] 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. ISP fees may apply and additional requirements may apply over time for updates.

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