

HP Z8 Fury G5 Workstation Desktop PC

Extreme performance. Infinite possibilities



Experience a new echelon in high performance. Transformative single socket technology delivers extreme performance with up to 56 cores in a single CPU, to also unleash the power of up to 4 high-end GPUs. Now you can breeze through even the most complex deep learning, virtual production, and VFX.

Relentless power. Extraordinary expandability

Tackle the most complex workflows with up to a 56 core Intel® Xeon® W CPU¹, up to 4 high-end GPUs, 2TB DDR5 RAM, 120 TB storage and 2,250W of power.² Easily expand as work evolves with 8 PCIe slots (up to Gen 5), and 4 front accessible NVMe bays.³

Engineered to stay cool and quiet

Push your desktop workstation without disruptive noise. Smart fan control keeps the system whisper-quiet by tuning fan speeds in real-time using over 20 temperature sensors. Precisely placed vents and ducts streamline airflow and heat removal.

Redundant power. Reassuring reliability

Never worry that your PC will fail mid-project. For the first time in a Z desktop workstation get a redundant power supply⁴ for built-in backup. This PC also undergoes 360K hours of rigorous testing, military-standard testing⁵ and ISV certifications.

Solutions for smarter workflows

Remotely access the power of your Z with HP Anyware⁶. Get fast responsiveness and image quality even in high-end workflows. Save time with WSL2⁷, enabling Linux to run in Windows. Get easy access to tools from the Z by HP Data Science Stack Manager⁸.



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Additional Features

Operating Systems

Support your unique user needs with a choice of Windows 11 Pro, WSL2 or Linux® operating systems.⁹

Intel® Xeon® W Processors

Power extreme professional workloads with a transformative single socket Intel® Xeon® W CPU (up to 56 cores¹), Intel vPro®¹⁰ manageability and security, and ECC Memory¹¹ for reliability.

Professional Grade Graphics

A first for Z desktop PCs - tackle complex renderings, simulations and datasets with up to 4 NVIDIA RTX™ 6000 Ada Generation GPUs or 2 AMD Radeon™ Pro W6800 GPUs.¹³

Ultra Fast Memory Configurations

Accelerate workflows. Power through memory-intensive workloads with up to 2 TB DDR5 memory¹⁴ for fast rendering, simulation, film and video editing, and deep learning performance.

Storage

Get up to 120TB of storage across a variety of devices, including new front-accessible, hot-swappable NVMe devices with status information via external LED and email notifications.¹⁵

Redundant/Aggregate Power Supply

Use redundant power to stay up and running during critical workflow. Or switch to aggregate power to combine two power supplies for 2,250W power when you need it.¹⁶

Fast Data Transfer and Network Connectivity

Thunderbolt™ 4 technology¹⁷ for fast data transfers, two optional USB3.2 SuperSpeed Type-C® connectors for transfer rates up to 20Gbps, and two ports of 10 GbE network connection.

HP Anyware

Access the power of your Z from any device with HP Anyware¹⁸—remote access software delivering fast responsiveness and image quality, even in film editing and data visualizations.

Smart Support with HP TechPulse

Get enhanced support and reduce downtime. HP Smart Support¹⁹ provides support agents, secure access to device health insights, and configuration data for faster troubleshooting.

Z by HP Data Science Stack Manager

Z by HP Data Science Stack Manager provides easy access to popular data science tools and updates them automatically, to help you customize your environment on Windows or Ubuntu.²⁰

ISV Certified

Work with confidence knowing your desktop is certified with leading software applications to ensure peak performance even with complex projects.

World Class Design & Acoustics

Keep quiet, cool and focused even at peak performance. Smart fan control keeps the system whisper-quiet by tuning fan speeds in real-time using 20 temperature sensors.



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Specifications Table

Available Operating Systems	Windows 11 Pro for Workstations ^{2,3} Ubuntu 22.04 LTS Linux® Ready ⁵ Red Hat® Enterprise Linux® ⁵
Processor family	Intel® Xeon® processor
Available Processors⁷	Intel® Xeon® W9-3495X (1.9 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 105 MB L3 cache, 56 cores, 112 threads) Intel® Xeon® W9-3475X (2.2 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 82.5 MB L3 cache, 36 cores, 72 threads) Intel® Xeon® W7-3465X (2.5 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 75 MB L3 cache, 28 cores, 56 threads) Intel® Xeon® W7-3455 (2.5 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 67.5 MB L3 cache, 24 cores, 48 threads) Intel® Xeon® W7-3445 (2.6 GHz base frequency, up to 4.8 GHz with Intel® Turbo Boost Technology, 52.5 MB L3 cache, 20 cores, 40 threads) Intel® Xeon® W5-3435X (3.1 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 45 MB L3 cache, 16 cores, 32 threads) Intel® Xeon® W5-3433 (2.0 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 45 MB L3 cache, 16 cores, 32 threads) Intel® Xeon® W5-3425 (3.2 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 30 MB L3 cache, 12 cores, 24 threads) Intel® Xeon® W5-3423 (2.1 GHz base frequency, up to 4.2 GHz with Intel® Turbo Boost Technology, 30 MB L3 cache, 12 cores, 24 threads) Intel® Xeon® Gold 5416S (2.0 GHz base frequency, up to 4.0 GHz with Intel® Turbo Boost Technology, 30 MB L3 cache, 16 cores, 32 threads)
Chipset	Intel® W790
Form factor	Tower
Maximum memory	2 TB DDR5-4800 ECC SDRAM ¹¹ Transfer rates up to 4800 MT/s.
Memory slots	16 DIMM
Internal storage	1 TB up to 12 TB 7200 rpm SATA Enterprise HDD ^{8,40} 512 GB up to 2 TB HP Z Turbo Drive NVMe™ M.2 SSD ⁸ 512 GB up to 4 TB HP Z Turbo Drive PCIe® SSD M.2 ⁸ 512 GB up to 4 TB HP Z Turbo Drive PCIe® SED Opal 2 M.2 SSD ⁸ 512 GB up to 4 TB HP Z Turbo Drive Dual Pro PCIe® SSD ⁸
Optical drive	HP Slim DVD-ROM; HP Slim Blu-ray Writer; HP Slim DVD-Writer ^{9,10}
Available Graphics	Ultra High-End: NVIDIA RTX™ A6000 (48 GB GDDR6 dedicated) NVIDIA RTX™ A5000 (24 GB GDDR6 dedicated) AMD Radeon™ Pro W6800 (32 GB GDDR6 dedicated) NVIDIA RTX™ 6000 Ada Generation (48 GB GDDR6 dedicated) ³⁰ High-End: NVIDIA RTX™ A4500 (20 GB GDDR6 dedicated) NVIDIA RTX™ A4000 (16 GB GDDR6 dedicated) NVIDIA® A4000E (16 GB GDDR6 dedicated) NVIDIA RTX™ A2000 (12 GB GDDR6 dedicated) NVIDIA RTX™ A2000E (12 GB GDDR6 dedicated) ³⁰ Mid-Range: NVIDIA® T1000 (8 GB GDDR6 dedicated) NVIDIA® T1000E (8 GB GDDR6 dedicated) AMD Radeon™ Pro W6600 (8 GB GDDR6 dedicated) ³⁰ Entry: NVIDIA® T1000 (4 GB GDDR6 dedicated) NVIDIA® T400 (4 GB GDDR6 dedicated) AMD Radeon™ RX 6400 (4 GB GDDR6 dedicated) Intel® Arc™ Pro A40 (6 GB GDDR6 dedicated)
Audio	Realtek ALC3205-CG
Expansion slots	1 PCIe 3 x8; 2 PCIe 5 x16; 1 PCIe 5 x4; 2 PCIe 4 x16; 2 PCIe 4 x4; 2 PCIe 4 x8 (Rear bulkhead access can be achieved through all slots but 2 PCIe 4 x8 are internal access only for M.2.)
Memory card device	1 SD card reader (optional)
Ports and connectors	Front (Premium version): 2 SuperSpeed USB Type-C® 20Gbps signaling rate (USB Power Delivery); 2 SuperSpeed USB Type-A 5Gbps signaling rate; 1 headset/microphone combo ²⁹ ; Front (Entry version): 4 USB Type-A 5Gbps signaling rate; 1 headphone/microphone combo
Keyboard	HP USB Business Slim SmartCard CCID Keyboard; HP USB 320K Keyboard; HP 125 Black Wired Keyboard ¹³
Mouse	HP Wired Desktop 320M mouse; HP wired desktop 128 laser mouse ¹³



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Communications	LAN: Intel® Ethernet Network Adapter I225-T1; Integrated Intel® I219-LM PCIe® GbE, vPro®; Integrated Intel® I210-AT PCIe® GbE, non-vPro®; HP dual-port 10GBase-T NIC; Intel® X550-T2 dual-port 10GbE NIC; NVIDIA® Mellanox ConnectX-6 DX Dual Port 10/25GbE SFP28 NIC; Allied Telesis AT-2911T/2-901 dual-port 1GbE NIC; Allied Telesis AT-2914SX/LC PCIe Fiber NIC; HP dual-port 10 GBASE-T NIC (PCIe slot not required); HP 10 GbE SFP+ SR LC Fiber transceiver; HP 25 GbE SFP28 LC Fiber transceiver³⁹; WLAN: Intel® Wi-Fi 6E AX210 (2x2) and Bluetooth® 5.3 wireless card, non-vPro® with external antenna^{12,31};
Drive Bays	External: Four NVMe™ M.2 SSD; Two 3.5" HDD; Two 9.5 mm ODD; Internal: Six PCIe® M.2 SSD; Six 3.5" HDD
Software ^{17,18,19,33}	HP PC Hardware Diagnostics UEFI HP Performance Advisor HP Support Assistant HP PC Hardware Diagnostics Windows HP Image Assistant HP Manageability Integration Kit HP Anyware HP Data Science Stack Manager
Security management ^{20,21,22,23,24,25,26,27}	Full volume encryption HP Secure Erase Kensington lock slot Secure authentication TPM 2.0 certified HP BIOSphere HP Sure Run HP Sure Click HP Sure Sense HP Sure Admin HP Platform Certificate HP Sure Start HP Sure Recover Self-Encrypted Drives
Security Software Licenses	HP Wolf Pro Security Edition ²⁸
Management features	HP Driver Packs; HP System Software Manager (download); HP BIOS Configuration Utility (download); HP Smart Support
Power	2250 W internal aggregate power supply, up to 90% efficiency, active PFC; 1125 W internal power supply, up to 90% efficiency, active PFC; 1125 W internal redundant power supply, up to 90% efficiency, active PFC; 1450 W internal power supply, up to 90% efficiency, active PFC; 1450 W internal redundant power supply, up to 90% efficiency, active PFC
Dimensions	21.59 x 55.12 x 44.45 cm
Weight	Starting at 22 kg; (Exact weights depend upon configuration (System weight only))
Ecolabels	EPEAT® registered configurations available; TCO Certified configurations available ^{14,15}
Energy star certified	ENERGY STAR® certified (configurations available)
Sustainable impact specifications	Low Halogen; 40% post-consumer recycled plastic; 25% ITE-derived closed loop plastic; Bulk packaging available; External power supply 90% efficiency; Plastic cushion inserts contain 80% recycled content; Ocean-bound plastic in system fan; 10% post-industrial recycled metal ¹⁶
Compatible displays	All HP Z Displays and HP DreamColor Displays are supported. For more information see http://www.hp.com/go/zdisplays



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Messaging Footnotes

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 2TB DDR5 memory is planned to be available by the first half of 2023.

³ Optional, configurable features. Configurations for 120TB storage and for front accessible NVME bays are planned to be available in the first half of 2023. NVMe bay email notifications are planned to be available in the second half of 2023. Configuration for 120TB requires separate additional purchase. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB is reserved for system recovery software.

⁴ Optional, configurable feature. Redundant and aggregate power requires configuring two 1125W power supplies at hardware purchase.

⁵ Testing is not intended to demonstrate fitness of U.S. Department of Defense (DoD) contract requirements or for military use. Test results are not a guarantee of future performance under these test conditions. Accidental damage requires an optional HP Accidental Damage Protection Care Pack.

⁶ Network access required. HP Anyware software and licensing are available through a 1- or 3-year subscription. Renewal is required after the subscription term. HP Anyware subscriptions are based on the number of concurrent PCoIP connections used (pay for the number of host connections, not the software) with a minimum order quantity of 5. For a limited time, an HP Anyware Professional subscription also includes access and support for ZCentral Remote Boost and ZCentral Connect and is available for purchase through an HP reseller or contact sales at hp.com/Anyware. ZCentral Remote Boost Sender requires Windows 10 and 11, 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. ZCentral Connect requires Windows (10 or 11) or Windows Server (2016 or 2019) operating system, Microsoft Active Directory and Intel Active Management Technology for select features. For system requirements and to install HP Anyware and Anyware Manager, refer to the Admin Guides at: <https://docs.teradici.com/find/product/hp-anyware>.

⁷ Optional, configurable feature that must be configured at purchase. Requires Windows 10 or higher, Intel Core i5 processor or higher and is available on select Z workstations. You must be running Windows 10 version 21H2 and higher (Build 19044 and higher) or Windows 11.

⁸ Z by HP Data Science Stack Manager requires Windows 10 version 21H2 (Build 19044) and higher or 64-bit Ubuntu 20.04 and is available on select Z workstations.

¹² HP Wolf Security for Business requires Windows 10 or 11 Pro or higher, includes various HP security features and is available on HP Pro, Elite and Workstation products. See product details for included security features and OS requirement.

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 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>.

¹⁰ Intel vPro® Enterprise technologies are available only on Intel® Xeon® W-3400 and Intel® Xeon® W-2400 processors. 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>.

¹¹ Error Correction Code (ECC) memory enables enhanced data reliability. ECC memory is only available on Intel® Xeon® processor options.

¹³ GPUs are sold separately or as an optional feature.

¹⁴ 2 TB DDR5 memory is planned to be available in the first half of 2023.

¹⁵ Optional, configurable features. Configurations for 120TB storage and for front accessible NVME bays are planned to be available in the first half of 2023. Configuration for 120TB requires separate additional purchase. For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB is reserved for system recovery software.

¹⁶ Redundant and aggregate power requires configuring two 1125W power supplies at hardware purchase.

¹⁷ Two ports of 10 GbE network connection is planned to be available by the first half of 2023. SuperSpeed USB 20Gbps is not available with Thunderbolt™ 4.

¹⁸ Network access required. HP Anyware software and licensing are available through a 1- or 3-year subscription. Renewal is required after the subscription term. HP Anyware subscriptions are based on the number of concurrent PCoIP connections used (pay for the number of host connections, not the software) with a minimum order quantity of 5. For a limited time, an HP Anyware Professional subscription also includes access and support for ZCentral Remote Boost and ZCentral Connect and is available for purchase through an HP reseller or contact sales at hp.com/Anyware. ZCentral Remote Boost Sender requires Windows 10 and 11, 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. ZCentral Connect requires Windows (10 or 11) or Windows Server (2016 or 2019) operating system, Microsoft Active Directory and Intel Active Management Technology for select features. For system requirements and to install HP Anyware and Anyware Manager, refer to the Admin Guides at: <https://docs.teradici.com/find/product/hp-anyware>.

¹⁹ HP Smart Support automatically collects the telemetry necessary upon initial boot of the product to deliver device-level configuration data and health insights and is available preinstalled on select products, or it can be downloaded. For more information about how to enable HP Smart Support or to download, please visit <http://www.hp.com/smart-support>.

²⁰ Z by HP Data Science Stack Manager requires Windows 10 version 21H2 (Build 19044) and higher or 64-bit Ubuntu 20.04 and is available on select Z workstations.

²¹ Based on HP's internal analysis of workstations with minimum 3 ISV Certifications, professional graphics and a dedicated workstation brand as of September, 2022 and most powerful based on processor, graphics, memory, and power supply.

² Windows 11 Pro for Workstations can be preinstalled. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.

³ Note: Windows 7 and Windows 8 operating systems are not supported on this product. No Windows 7 or Windows 8 drivers will be provided on <http://www.support.hp.com>.

⁵ Note: For detailed Linux® OS/hardware support information, see: http://www.hp.com/support/linux_hardware_matrix.

⁷ 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>.

⁸ For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 35GB (for Windows) is reserved for system recovery software.

⁹ 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. No support for DVD RAM.

¹⁰ 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.

¹¹ The 2TB memory configuration requires 128GB DIMMs which is planned to be available in the first half of 2023.

¹² 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.

¹³ Optional or add-on feature.

¹⁴ Based on US EPEAT® registration according to IEEE 1680.1-2018 EPEAT®. Status varies by country. Visit www.epeat.net for more information.

¹⁵ TCO Certified configurations available when ENERGY STAR configurations are selected with a USB Type-C® connector. ENERGY STAR available with a combination of high-performance CPU's, high-performance GPU's and select memory configurations.

¹⁶ External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.

¹⁷ 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>.

¹⁸ HP Support Assistant requires Windows and Internet access.

¹⁹ HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.

²⁰ HP Sure Click requires Windows 11 Pro or Enterprise. See https://bit.ly/2PrLT6A_SureClick for complete details.

²¹ HP Sure Start Gen7 is available on select HP PCs and Workstations. See product specifications for availability.

²² 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.

²³ 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.

²⁴ HP Sure Run Gen5 is available on select HP PCs and requires Windows 10 and higher.

²⁵ 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.

²⁶ HP Secure Erase for the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.

²⁷ HP BIOSphere Gen6 features may vary depending on the platform and configurations.

²⁸ 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.

²⁹ Front entry contain: 1 headset connector; 4 SuperSpeed USB Type-A 5Gbps signaling rate. Front Entry and Front Premium offer Battery Charging 1.2 through one of the USB Type-A ports.

³⁰ NVIDIA graphics cards denoting a letter "E" refer to long-life variants of the card.

³¹ Wi-Fi 6E requires a Wi-Fi 6E router, sold separately, to function in the 6GHz band. Availability of public wireless access points limited. Wi-Fi 6E is backwards compatible with prior 802.11 specs. And available in countries where Wi-Fi 6E is supported.

³³ 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/performanceadvisor.html>.

³⁴ Percentage of ocean-bound plastic contained in each component varies by product.

³⁵ Recycled plastic content percentage is based on the definition set in the IEEE 1680.1-2018 standard.

³⁶ 100% outer box packaging and corrugated cushions made from sustainably sourced certified and recycled fibers.

³⁷ Fiber cushions made from 100% recycled wood fiber and organic materials.

³⁹ The NVIDIA® Mellanox ConnectX-6 DX Dual Port 10/25GbE SFP28 NIC requires a transceiver in order to connect to a network. Transceivers sold separately.

⁴⁰ Starting November 1, 2023, HP PCs with Windows require Windows to be installed on SSD. HDD can only be configured as additional data drives and not as the boot drive.

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>.

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