

## Datasheet

# HP Z4 G4 Workstation



## HP's bestselling performance workstation

HP's most popular workstation just got better. Perfect for engineering, the Z4 delivers mainstream performance for a wide spectrum of applications. With server-grade processing and a full set of components you get everything you need, nothing more.



## HP recommends Windows 10 Pro.

### Feature-rich functionality

- The Z4 is ahead of its time with more standard features than any other single processor HP workstation. With multiple configuration options, you can choose the perfect blend of components that meet your performance requirements.

### All the power without the noise

- Next-generation acoustic design delivers quiet performance. A high frequency processor with a multi-core count is fully capable of handling the demands of 3D CAD and rendering software, so you can visualize your idea anytime during the design process.

### The world's most secure workstations<sup>2</sup>

- Advanced security features come standard on every Z4. Rest assured your device, identity and data are safe with security software like HP Client Security Suite<sup>3</sup> and HP Sure Start, the industry's first self-healing BIOS with intrusion detection.

### Featuring

- Support your unique user needs with a choice of Windows 10 Pro 64 or Linux<sup>®</sup> operating systems.
- Run demanding professional apps with the newest generation Intel<sup>®</sup> Xeon<sup>®</sup> processors with up to 10 cores for powerful performance and productivity.
- Get serious about graphics and reach peak productivity with access to a breadth of NVIDIA<sup>®</sup> and AMD professional graphics from entry to high-end 3D.
- Install pro-grade storage hardware and elevate your storage-bound apps without sacrificing standard PCIe slots.
- The simply stunning design features front and rear handles, so you can easily relocate your system.
- Save space within your office layout with a 10% smaller chassis than the previous generation.
- Work stress-free knowing your BIOS has not been compromised. HP Sure Start automatically detects intrusions in real-time, notifies you, and restores BIOS.
- Multiple high-speed network connections are easy and speedy with dual embedded 1GbE LAN ports.
- The optional dual front I/O USB 3.1 G2 Type C™ module lets you transfer data to devices using modern connection technology at higher data rates.
- Optional self-encryption drives thwart outside access so your valuable IP won't fall into the wrong hands.

# HP Z4 G4 Workstation Specifications Table



|                                     |  |
|-------------------------------------|--|
| <b>Operating System</b>             | Windows 10 Pro for Workstations <sup>1</sup><br>HP Installer Kit for Linux®<br>Red Hat® Enterprise Linux®  |
| <b>Processor Family</b>             | Intel® Xeon® W processor   |
| <b>Processors<sup>2,3</sup></b>     | Intel® Xeon® W2155 (3.3 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 13.75 MB cache, 10 cores); Intel® Xeon® W2145 (3.7 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 11 MB cache, 8 cores); Intel® Xeon® W2133 (3.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores); Intel® Xeon® W2125 (4 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 4 cores); Intel® Xeon® W2135 (3.7 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 6 cores); Intel® Xeon® W2123 (3.6 GHz base frequency, up to 3.9 GHz with Intel® Turbo Boost Technology, 8.25 MB cache, 4 cores); Intel® Xeon® W2104 (3.2 GHz, 8.25 MB cache, 4 cores); Intel® Xeon® W2102 (2.9 GHz, 8.25 MB cache, 4 cores) |
| <b>Chipset</b>                      | Intel® C422  |
| <b>Maximum Memory</b>               | Up to 256 GB DDR4-2666 ECC SDRAM <sup>8</sup><br>Standard memory note: Transfer rates up to 2666 MT/s.   |
| <b>Memory Slots</b>                 | 8 DIMM   |
| <b>Drive Controllers</b>            | Integrated SATA 6.0 Gb/s; Factory integrated RAID available for SATA/SAS drives (RAID 0, 0 Data, 1, 5, and 10)   |
| <b>Internal Storage</b>             | up to 300 GB SAS (15000 rpm) <sup>4</sup><br>500 GB up to 2 TB SATA (7200 rpm) <sup>4</sup><br>up to 500 GB SATA SED (7200 rpm) <sup>4</sup><br>1 TB up to 4 TB 7200 rpm SATA Enterprise <sup>4</sup><br>256 GB up to 2 TB SATA SSD <sup>4</sup><br>256 GB up to 512 GB SATA SED Opal 2 SSD <sup>4</sup><br>240 GB up to 480 GB SATA Enterprise SSD <sup>4</sup>   |
| <b>Optical Storage</b>              | HP Slim DVD-ROM; HP Slim Blu-ray Writer; HP Slim DVD-Writer <sup>5,6</sup>   |
| <b>Additional Storage</b>           | HP SD 4 Media Card Reader (optional)   |
| <b>Drive Bays (Internal)</b>        | Two 2.5" or 3.5" <sup>16</sup>   |
| <b>Drive Bays (External)</b>        | Two 5.25" <sup>16</sup>  |
| <b>Available Graphics</b>           | Entry 3D: NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P600 (2 GB GDDR5 dedicated); AMD FirePro™ W2100 Graphics (2 GB DDR3 dedicated)<br>Mid-range 3D: NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P2000 (5 GB GDDR5 dedicated); AMD Radeon™ Pro WX 3100 Graphics (4 GB GDDR5 dedicated); AMD Radeon™ Pro WX 4100 Graphics (4 GB GDDR5 dedicated) <sup>17</sup><br>High-end 3D: NVIDIA® Quadro® P4000 (8 GB GDDR5 dedicated); AMD Radeon™ Pro WX 7100 Graphics (8 GB GDDR5 dedicated)<br>Ultra High-end 3D: NVIDIA® Quadro® P5000 (16 GB GDDR5X dedicated); NVIDIA® Quadro® P6000 (24 GB GDDR5X dedicated) <sup>17</sup>   |
| <b>Expansion Slots</b>              | 2 PCIe 3 x4; 2 M.2 PCIe 3 x4; 1 PCIe x8; 2 PCIe x16<br>Slots 2 and 4: PCH with open-ended connector. Slot 5: CPU with open-ended connector. M.2 Slots: CPU up to 80 mm storage devices.  |
| <b>Ports and Connectors</b>         | Front: 1 headset; 4 USB 3.1 (1 charging); 2 USB 3.1 Type-C™<br>Rear: 6 USB 3.1 Gen 1; 2 RJ-45 (1 GbE); 1 audio line out; 1 audio line in; 1 PS/2 mouse port; 1 PS/2 keyboard port; 1 serial port (optional)<br>Premium front includes: 1 headset, 2 USB 3.1 Gen 1 (1 charging), 2 USB 3.1 Gen 2 Type-C™, SD Media Card Reader.   |
| <b>Communications</b>               | LAN: Integrated Intel® I219-LM PCIe® GbE; Integrated Intel® I210-AT PCIe® GbE; Intel® I350-T2 dual-port GbE NIC; Intel® I350-T4 dual-port GbE NIC; Intel® I210-T1 PCIe® GbE; Intel® X550-T2 dual-port GbE NIC; Intel® X710-DA2 dual-port GbE NIC; Intel® 10 GbE SFP+ SR transceiver<br>WLAN: Intel® Dual Band Wireless-AC 8265 802.11a/b/g/n/ac. (2x2) Wi-Fi® and Bluetooth® 4.2 Combo, non-vPro <sup>9</sup>  |
| <b>Audio</b>                        | Integrated Realtek HD ALC221   |
| <b>Power</b>                        | 465 W internal power supply, up to 90% efficiency, active PFC; 750 W internal power supply, up to 90% efficiency, active PFC   |
| <b>Input Device</b>                 | HP PS/2 Business Slim Keyboard; HP USB Business Slim Keyboard; USB Premium wired keyboard; USB Smart Card (CCID) keyboard <sup>10</sup><br>3Dconnexion CADMouse; HP USB Optical Mouse; HP PS/2 Mouse; HP USB Hardened Mouse <sup>10</sup>  |
| <b>Security</b>                     | HP Sure Start Gen3; Secure authentication; Kensington lock slot; Full volume encryption; HP Keyed Cable Lock Kit; TPM 2.0 certified; HP Secure Erase <sup>14,15,18</sup>   |
| <b>Software</b>                     | HP Remote Graphics Software (RGS); HP Performance Advisor <sup>13</sup>  |
| <b>Dimensions</b>                   | 38.6 x 16.9 x 44.5 cm  |
| <b>Weight</b>                       | Starting at 10.2 kg Exact weight depends on configuration.   |
| <b>Energy Efficiency Compliance</b> | ENERGY STAR® certified and EPEAT® Gold registered configurations available <sup>11</sup>   |
| <b>Environmental Certification</b>  | Low halogen <sup>12</sup>  |
| <b>Compatible Displays</b>          | All HP Z Displays and HP DreamColor Displays are supported. For more information see <a href="http://www.hp.com/go/zdisplays">www.hp.com/go/zdisplays</a> .  |
| <b>Warranty</b>                     | 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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**HP recommends Windows 10 Pro.**

### Accessories and services (not included)

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**NVIDIA Quadro P1000 4GB Graphics**



Get full professional graphics performance for 3D models and 2D imagery and support for an expansive visual workspace of up to four 4K displays with the NVIDIA® Quadro® P1000, powered by NVIDIA Pascal™ GPU technology.

**Product number: 1ME01AA**

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**NVIDIA Quadro P2000 (5GB) Graphics Card**

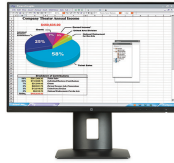


Achieve amazing detail, complexity, and realism across a variety of professional 3D applications on an expansive visual workspace of up to four 4K displays with the NVIDIA® Quadro® P2000, powered by NVIDIA Pascal™ GPU technology.

**Product number: 1ME41AA**

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**HP Z24n 24-inch Narrow Bezel IPS Display**



Create a seamless 16:10 multi-display<sup>1</sup> setup with the HP Z24n Narrow Bezel IPS Display, which has a virtually borderless screen for maximum impact imagery, factory color calibration to ensure optimal color accuracy, and flexible connectivity for all of your devices.

**Product number: K7B99A4**

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**3Dconnexion CadMouse**



Simplify scroll, click, and zoom functions and comfortably drive your CAD projects with the 3Dconnexion CADMouse.

**Product number: M5C35AA**

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**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**



## HP Z4 G4 Workstation

HP recommends Windows 10 Pro.

### Messaging Footnotes:

<sup>1</sup> 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>.

<sup>2</sup> Based on HP's unique and comprehensive security capabilities at no additional cost and HP's Manageability Integration Kit's management of every aspect of a PC including hardware, BIOS and software management using Microsoft System Center Configuration Manager among desktop workstation vendors as of June 2017 on HP Desktop Workstation with 7th Gen Intel® Processors.

<sup>3</sup> HP Client Security Suite features vary by platform.

<sup>4</sup> 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.

<sup>5</sup> Sold separately or as an optional feature.

<sup>6</sup> HP Z Premium Front I/O 2xUSB-A 2xUSB-C is sold separately or as an optional feature.

Screen image courtesy of Chris McLennan

Screen image courtesy of Renault Sport Racing

### Technical Specifications Footnotes:

<sup>1</sup> 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>.

<sup>2</sup> 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.

<sup>3</sup> Some vPro functionality of this technology, 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. Microsoft Windows required.

<sup>4</sup> For hard drives and solid state drives, 1 GB = 1 billion bytes, TB = 1 trillion bytes. Actual formatted capacity is less. Up to 30 GB of system disk is reserved for system recovery software.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> HP VR Ready Configurations available.

<sup>8</sup> For systems installed with Microsoft Windows 7 (Ultimate, Enterprise or Professional), the maximum accessible system memory is 192 GB. For systems installed with Microsoft Windows 8.x (Enterprise or Pro), the maximum accessible system memory is 512 GB.

<sup>9</sup> Wireless access point and Internet access required. Availability of public wireless access points limited. The specifications for the 802.11ac WLAN are draft specifications and are not final. If the final specifications differ from the draft specifications, it may affect the ability of the notebook to communicate with other 802.11ac WLAN devices.

<sup>10</sup> Optional or add-on feature.

<sup>11</sup> EPEAT® registered where applicable. EPEAT registration varies by country. See [www.epeat.net](http://www.epeat.net) for registration status by country. Search keyword generator on HP's 3rd party option store for solar generator accessories at <http://www.hp.com/go/options> [www.hp.com/go/options](http://www.hp.com/go/options)

<sup>12</sup> External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.

<sup>13</sup> HP Remote Graphics Software requires a Windows, Linux®, or Mac® OS X 10.10 and newer operating system and network access.

<sup>14</sup> HP Sure Start Gen3 is available on HP EliteBook, HP ZBook, and HP Z Workstation products equipped with Intel® 7th generation processors.

<sup>15</sup> HP Secure Erase: For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88. Supported on Elite platforms with BIOS version F.03 or higher.

<sup>16</sup> Each bay is configurable to 2.5" or 3.5".

<sup>17</sup> The AMD Radeon™ Pro WX 4100 Graphics is available only as an aftermarket option.

<sup>18</sup> HP Keyed Cable Lock Kit is available only as an aftermarket option.

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