

# HP Z2 Small Form Factor G4 Workstation



## HP's most powerful small form factor

Get next-level performance with a compact device that can easily handle single and multi-threaded applications. With nearly endless configuration options, the Z2 SFF is the perfect hardware solution for your customization needs.



## HP recommends Windows 10 Pro.

### Uncompromised power

- Whether designing in 3D or running multiple applications at once, high-speed CPUs and NVIDIA® Quadro® P1000 graphics optimize your performance. Plus, leading software certifications mean reliable performance throughout your workflow.

### Customized for your needs

- Tailor your hardware to meet your unique needs with over 1 million configurations. A range of I/O ports free up PCIe slots for new, specialized and legacy peripherals.

### HP's most secure and manageable workstations

- Get powerful protection from evolving malware threats with self-healing, hardware-enforced security solutions like HP Sure Start Gen4<sup>1</sup> which protects against BIOS attacks. Plus, easily manage multiple devices with the HP Manageability Integration Kit Gen2.<sup>2</sup>

### Featuring

- Support your unique user needs with a choice of Windows 10 Pro 64 for Linux® operating systems.<sup>3</sup>
- Get powerful performance on single and multi-threaded applications with the latest generation Intel® Xeon® and Core™ processors.<sup>4</sup>
- Get great 3D performance with support for NVIDIA® and AMD professional graphics from Entry to Mid-range 3D.
- With dual M.2 storage slots you can install the fastest pro-grade storage hardware to unlock your storage-bound apps without sacrificing standard PCIe slots.
- The stunning new design features front and rear ledges, so you can easily move your system from location to location.
- Perfect for OEMs, the Z2 SFF has the same dimensions as last generation and will ship and be supported over a long life.
- Protect the firmware that antivirus can't reach! The hardware-enforced self-healing protection offered by HP Sure Start Gen4 automatically recovers the BIOS from malware, rootkits, or corruption.
- Get multiple high-speed network connections including a second LAN option without needing to purchase and install an additional network interface card (NIC).
- With optional self-encryption drives, you have confidence knowing that if your storage device falls into the wrong hands, your valuable IP cannot be accessed.

# HP Z2 Small Form Factor G4 Workstation Specifications Table



Operating System	Windows 10 Pro 64 for Workstations – HP recommends Windows 10 Pro. <sup>1</sup> Windows 10 Home 64 <sup>1</sup> Windows 10 Pro (National Academic Plus) <sup>1,20</sup>
Processor Family	Intel® Xeon® processor (E-2176G, E-2174G, E-2146G, E-2144G, E-2136, E-2126G, E-2124G, E-2104G); Intel® Pentium® Gold processor; 8th Generation Intel® Core™ i7+ processor; 8th Generation Intel® Core™ i7 processor; 8th Generation Intel® Core™ i5+ processor; 8th Generation Intel® Core™ i5 processor; 8th Generation Intel® Core™ i3 processor <sup>2,3</sup>
Processors <sup>2,3,4,5,21</sup>	Intel® Xeon® E-2176G vPro™ (3.7 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores); Intel® Xeon® E-2174G vPro™ (3.8 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 9 MB cache, 4 cores); Intel® Xeon® E-2174G (3.8 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores); Intel® Xeon® E-2144G vPro™ (3.6 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 9 MB cache, 4 cores); Intel® Xeon® E-2144G (3.6 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores); Intel® Xeon® E-2136 vPro™ (3.3 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores); Intel® Xeon® E-2136 (3.3 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores); Intel® Xeon® E-2126G vPro™ (3.3 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores); Intel® Xeon® E-2126G (3.4 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores); Intel® Xeon® E-2104G vPro™ with Intel® HD Graphics P630 (3.2 GHz, 8 MB cache, 4 cores); Intel® Pentium® Gold G5400 with Intel® HD Graphics 610 (3.7 GHz base frequency, 4 MB cache, 2 cores); Intel® Core™ i7+ 8700K vPro™ (Core™ i7 and 16 GB Intel® Optane™ memory) with Intel® HD Graphics 630 (3.7 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores); Intel® Core™ i7+ 8700 vPro™ (Core™ i7 and 16 GB Intel® Optane™ memory) with Intel® HD Graphics 630 (3.2 GHz base frequency, up to 4.6 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores); Intel® Core™ i7 8700K vPro™ with Intel® HD Graphics 630 (3.7 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores); Intel® Core™ i7 8700 vPro™ with Intel® HD Graphics 630 (3.1 GHz base frequency, up to 4.3 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores); Intel® Core™ i5+ 8500 vPro™ (Core™ i5 and 16 GB Intel® Optane™ memory) with Intel® HD Graphics 630 (3 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores); Intel® Core™ i5 8500 vPro™ with Intel® HD Graphics 630 (3 GHz base frequency, up to 4.1 GHz with Intel® Turbo Boost Technology, 9 MB cache, 6 cores); Intel® Core™ i3-8100 with Intel® HD Graphics 630 (3.6 GHz, 6 MB cache, 4 cores)
Chipset	Intel® C246
Maximum Memory	Up to 64 GB DDR4-2400 ECC SDRAM; 64 GB DDR4-2400 non-ECC SDRAM <sup>7</sup> Standard memory note: Transfer rates up to 2666 MT/s.
Memory Slots	4 DIMM
Drive Controllers	Integrated SATA (4 ports 6 Gb/s) with integrated RAID 0, 1, for PCIe SSDs supported. Requires identical hard drives (speeds, capacity, interface).
Internal Storage	500 GB up to 6 TB 7200 rpm SATA <sup>8</sup> up to 500 GB SATA SED <sup>8</sup> 256 GB up to 2 TB SATA SSD <sup>8</sup> 280 GB up to 480 GB Intel® Optane™ SSD 900p <sup>8,21</sup> 256 GB up to 512 GB SATA SED SSD <sup>8</sup> up to 1 TB 7200 rpm SATA SSHD <sup>8</sup> 256 GB up to 1 TB HP Z Turbo Drive PCIe® NVMe™ SSD <sup>8</sup>
Optical Storage	HP Slim Blu-ray Writer; HP Slim DVD-ROM; HP Slim DVD-Writer <sup>9,18,19</sup>
Drive Bays (Internal)	One 2.5"; One 3.5"; Two M.2 NVMe 2280 SSD
Drive Bays (External)	Two 2.5" HP SmartDrive
Available Graphics	Integrated: Intel® HD Graphics 630; Intel® HD Graphics P630 <sup>10,11</sup> Entry 3D: AMD Radeon™ Pro WX 3100 Graphics (4 GB GDDR5 dedicated); NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated); AMD Radeon Pro™ WX 3100 (4 GB) <sup>12</sup>
Expansion Slots	2 M.2 PCIe 3 x4; 1 PCIe Gen 3 x16; 2 PCIe 3 x4 (x4 open ended connector); 2 PCIe 3 x4 (x16 connector)
Ports and Connectors	Front: 1 headphone/microphone combo; 1 USB 2.0 (charging); 2 USB 3.0; 1 USB 3.1 Gen 2 Type-C™ (charging) <sup>9</sup> Back: 1 audio-in; 1 audio-out; 1 DVI-I single link; 1 RJ-45; 2 DisplayPort™ 1.2; 2 USB 2.0; 4 USB 3.0 <sup>14</sup> Internal: 1 USB 3.0; 2 USB 2.0 1 USB 3.0 and 2 USB 2.0 ports available as 2 separate 2 x 10 (3.0 x 1, 2.0 x 1) and 2 x 5 (2.0 x 2) header. Supports one HP Internal USB 2.0 Port Kit and one USB 3.0 media card reader.
Communications	LAN: Integrated Intel® I219-LM PCIe® GbE; Intel® I210-T1 PCIe® NIC GbE; Intel® I350-T2 dual-port GbE NIC <sup>9</sup> WLAN: Intel® Dual Band Wireless-AC 9560 802.11a/b/g/n/ (2x2) Wi-Fi® and Bluetooth® 5 Combo <sup>13</sup>
Power	310 W external power adapter, up to 92% efficiency, active PFC; 250 W external power adapter, up to 90% efficiency, active PFC
Input Device	HP PS/2 Business Slim Keyboard; HP USB Business Slim Keyboard; HP Wireless Business Slim Keyboard; USB Smart Card (CCID) keyboard <sup>9</sup> 3D connexion CADMouse; HP SpaceMouse Pro USB 3D; HP USB 1000 dpi Laser Mouse; HP USB Hardened Mouse; HP USB Optical 3-Button Mouse; HP USB Optical Mouse <sup>9</sup>
Security	HP Business PC Security Lock Kit; HP Keyed Cable Lock Kit; HP Solenoid Hood Lock and Sensor; HP UltraSlim Cable Lock Kit <sup>9</sup>
Software	Buy Office; CyberLink Power2Go; CyberLink PowerDVD; HP Client Security Software; HP PC Hardware Diagnostics UEFI; HP Performance Advisor; HP Remote Graphics Software (RGS) 7.1; PDF Complete - Corporate Edition <sup>15,16,22,23,24,25,26,27,28</sup>
Dimensions	33.8 x 38.1 x 10 cm Standard desktop orientation.
Weight	Starting at 5.7 kg Exact weight depends on configuration.
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® registered configurations available <sup>17</sup>
Environmental Certification	Low halogen
Compatible Displays	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>
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.

## HP Z2 Small Form Factor G4 Workstation

### Accessories and services (not included)

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16GB (1x16GB) DDR4-2666  
ECC Reg RAM



Boost the capabilities of your HP Workstation and improve system performance and application responsiveness with low-power, high-speed DDR4 memory from HP.  
**Product number: 1XD85AA**

3Dconnexion CadMouse



Simplify scroll, click, and zoom functions and comfortably drive your CAD projects with the 3Dconnexion CADMouse.  
**Product number: M5C35AA**

HP Z38c 37.5-inch Curved  
Display



Completely immerse yourself in the expansive elegance of the HP Z38c Curved Display. Form meets function with crisp, panoramic views so you can stay focused on your work.  
**Product number: Z4W65A4**

HP Wireless Premium  
Keyboard



Boost your productivity and work comfortably with the elegant, redesigned, anodized aluminum-trimmed HP USB Premium Keyboard.  
**Product number: Z9N41AA**

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 Z2 Small Form Factor G4 Workstation

### Messaging Footnotes:

- <sup>1</sup> HP Sure Start Gen4 is available on HP Elite and HP Workstation products equipped with 8th generation Intel® or AMD processors.
- <sup>2</sup> HP Manageability Integration Kit Gen2 can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- <sup>3</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>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> HP Sure Start Gen4 is available on HP Elite and HP Workstation products equipped with 8th generation Intel® or AMD processors.
- <sup>6</sup> Sold separately or as an optional feature.
- <sup>7</sup> Sold separately or as an optional feature.

### 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> 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>
- <sup>4</sup> Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system.
- <sup>5</sup> vPro. Some 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. Compatibility future "virtual appliances" is yet to be determined.
- <sup>6</sup> Intel Turbo Boost performance varies depending on hardware, software and overall system configuration. See <http://www.intel.com/technology/turboboost> for more information.
- <sup>7</sup> Only 2 DIMM configurations run at 2400 MHz and 4 DIMM configurations run at 2133 MHz.
- <sup>8</sup> For storage drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36GB of system disk (for Windows 10) is reserved for system recovery software.
- <sup>9</sup> Optional or add-on feature
- <sup>10</sup> HD content required to view HD images.
- <sup>11</sup> Intel® HD graphics 630 is configurable as a standalone graphics option; Intel® HD graphics P630 only used when NVIDIA® Optimus™ Technology is enabled.
- <sup>12</sup> NVIDIA® Quadro® mobile professional graphics support up to four independent displays when using a HP ZBook Dock with Thunderbolt 3 (sold separately) or DP 1.2 hubs with MST.
- <sup>13</sup> Wireless access point and Internet service required and sold separately. 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 workstation to communicate with other 802.11ac WLAN devices.
- <sup>14</sup> 3 DisplayPort 1.2 in Performance model.
- <sup>15</sup> HP Client Security requires Windows and Intel® or AMD 7th or 8th generation processors.
- <sup>16</sup> HP Performance Advisor and HP Remote Graphics Software requires internet access.
- <sup>17</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 [www.hp.com/go/options](http://www.hp.com/go/options).
- <sup>18</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.
- <sup>19</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>20</sup> Some devices for academic use will automatically be updated to Windows 10 Pro Education with the Windows 10 Anniversary Update. Features vary; see <https://aka.ms/ProEducation> for Windows 10 Pro Education feature information.
- <sup>21</sup> Intel® Optane™ available Fall 2018
- <sup>22</sup> HP BIOSphere Gen4 features may vary depending on the PC platform and configurations requires 8th Gen Intel® processors.
- <sup>23</sup> HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>
- <sup>24</sup> HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors.
- <sup>25</sup> HP Sure Click is available on select HP platforms and supports Microsoft® Internet Explorer and Chromium™. Check <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=4AA7-0922ENW> for all compatible platforms as they become available.
- <sup>26</sup> HP Sure Start Gen4 is available on HP EliteBook products equipped with Intel® 8th generation processors.
- <sup>27</sup> HP Sure Run is available on HP Elite products equipped with 8th generation Intel® or AMD® processors.
- <sup>28</sup> HP Sure Recover is available on HP Elite PCs with 8th generation Intel® or AMD processors and requires an open, wired network connection. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.

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