



# HP Z2 Tower G4 Workstation

Experience server-grade power in a desktop workstation with impressive expandability. Confidently tackle complex workloads like BIM and rendering with up to Ultra 3D graphics and the latest Intel® Core™ or Intel® Xeon® processors.

HP recommends Windows 10 Pro.



## Advanced performance

The Z2 Tower is equipped to handle demanding 3D projects with high-end certified professional graphics power. And with high clock speeds, you'll get full unthrottled performance, even with your heaviest workloads.

## Built to expand

HP's most expandable entry workstation is designed to grow with you. Whether you need to swap graphics, increase CPU power or add specialized PCIe cards, the Z2 Tower can meet your every-changing workload requirements.

## 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 or Linux® operating systems.<sup>3</sup>
- Get powerful performance on single-threaded applications with the latest generation Intel® Xeon® E processors with up to 6 cores.<sup>4</sup>
- Maximize your 3D workflow with support for multiple NVIDIA® and AMD professional graphics from Entry to Ultra 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.
- Save space within your office layout with a 14% smaller system than the previous generation.
- 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.<sup>5</sup>
- Get multiple high-speed network connections including a second LAN option without needing to purchase and install an additional network interface card (NIC).<sup>6</sup>
- Configure a 250W power supply for cost savings or optimize your configuration with a 500W power supply.
- 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.<sup>7</sup>

## HP Z2 Tower G4 Workstation Specifications Table



Operating System	Windows 10 Pro for Workstations 64 - HP recommends Windows 10 Pro <sup>1</sup> Windows 10 Pro (National Academic only) <sup>1,20</sup>
Processor Family <sup>2,3</sup>	Intel® Pentium® Gold processor 8th Generation Intel® Core™ i3 processor 8th Generation Intel® Core™ i5 processor 8th Generation Intel® Core™ i5+ processor 8th Generation Intel® Core™ i7 processor 8th Generation Intel® Core™ i7+ processor Intel® Xeon® processor (E-2176G, E-2174G, E-2146G, E-2144G, E-2136, E-2126G, E-2124G, E-2104G)
Processors <sup>2,3,4,5,6,21,30</sup>	Intel® Pentium® Gold G5400 with Intel® HD Graphics 610 (3.7 GHz base frequency, 4 MB cache, 2 cores) Intel® Core™ i3-8100 with Intel® HD Graphics 630 (3.6 GHz, 6 MB cache, 4 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™ i5 8600 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+ 8600 vPro™ (Core™ i5 and 16 GB Intel® Optane™ memory) 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™ i7 8700 vPro™ 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™ (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™ (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® Xeon® E-2104G vPro™ with Intel® HD Graphics P630 (3.2 GHz, 8 MB cache, 4 cores) Intel® Xeon® E-2104G with Intel® HD Graphics P630 (3.2 GHz, 8 MB cache, 4 cores) Intel® Xeon® E-2124G (3.4 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Xeon® E-2124G vPro™ (3.4 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Xeon® E-2126G (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, 12 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-2136 vPro™ (3.3 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 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-2144G vPro™ (3.6 GHz base frequency, up to 4.5 GHz with Intel® Turbo Boost Technology, 8 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-2174G vPro™ (3.8 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 8 MB cache, 4 cores) Intel® Xeon® E-2176G (3.7 GHz base frequency, up to 4.7 GHz with Intel® Turbo Boost Technology, 12 MB cache, 6 cores) 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)
Chipset	Intel® C246
Maximum Memory	64 GB DDR4-2666 ECC SDRAM; 64 GB DDR4-2666 non-ECC SDRAM <sup>7</sup> (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> 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 905P <sup>8,21</sup> 256 GB up to 512 GB SATA SED SSD <sup>8</sup> 256 GB HP Z Turbo Drive G2 PCIe® SSD <sup>8</sup> 256 GB up to 1 TB HP Z Turbo Drive G2 PCIe® NVMe™ SSD <sup>8,31</sup>
Optical Storage	HP Slim Blu-ray Writer; HP Slim DVD-ROM; HP Slim DVD-Writer <sup>9,18,19</sup>
Available Graphics	Integrated: Intel® UHD Graphics 630; Intel® UHD Graphics P630 <sup>10,11</sup> Entry 3D: AMD Radeon™ Pro WX 3100 Graphics (4 GB GDDR5 dedicated); AMD Radeon™ Pro WX 7100 Graphics (8 GB GDDR5 dedicated); NVIDIA® Quadro® P1000 (4 GB GDDR5 dedicated); NVIDIA® Quadro® P2000 (5 GB GDDR5 dedicated); NVIDIA® Quadro® P400 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P5000 (16 GB GDDR5X dedicated); NVIDIA® Quadro® P620 (2 GB GDDR5 dedicated); NVIDIA® Quadro® P4000 (16 GB GDDR5 dedicated) <sup>12</sup>
Audio	Conexant CX20632-31Z, 1.5W internal mono speaker
Networking	LAN: Integrated Intel® I219-LM PCIe® 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
Expansion Slots	2 M.2 PCIe 3 x4; 1 PCIe Gen 3 x16; 2 PCIe 3 x1 (x4 open ended connector); 2 PCIe 3 x4 (x16 connector)
Ports and Connectors	Front: 1 headphone/microphone combo; 2 USB 3.0 (1 charging); 1 USB 3.1 Gen 2 Type-C™ <sup>13</sup> Rear: 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 Optional: Flex I/O (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.)

Drive Bays (Internal)	Two 3.5"; Two M.2 NVME 2280 SSD
Drive Bays (External)	Two 5.25"
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>
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; HP Sure Recover; HP Manageability Integration Kit Gen2 <sup>15,16,23,28</sup>
Security	HP Business PC Security Lock Kit; HP Keyed Cable Lock Kit; HP Solenoid Hood Lock and Sensor; HP UltraSlim Cable Lock Kit; HP Client Security Suite Gen 4; HP Sure Start Gen 4; HP Sure Run; HP Sure Click; HP BIOSphere Gen4 <sup>9,22,24,25,26,27</sup>
Power	500 W internal power adapter, up to 90% efficiency, active PFC; 250 W internal power adapter, up to 92% efficiency, active PFC
Dimensions (W x D x H)	14 x 6.7 x 17.1 in 35.6 x 16.9 x 43.5 cm (Standard tower orientation.)
Weight	Starting at 15.43 lb Starting at 7 kg
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® registered configurations available <sup>17</sup>
Environmental Certification	Low halogen <sup>29</sup>
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	Protected by HP global standard limited warranty of 3 years parts, labor and on-site service. Terms and conditions may vary by country. Certain restrictions and exclusions apply. 24/7 operation will not void the HP warranty.

## HP Z2 Tower G4 Workstation

### Recommended accessories and services (not included)

#### HP Z24n G2 24-inch Display



Be a productive powerhouse with the sleek WUXGA HP Z24n G2 24-inch Display. This virtually seamless display is factory-tested for reliability and longevity with integrated color calibration, uninterrupted multi-screen<sup>1</sup> tiling, and expansive device connections, including USB-C™.

Product number: 1J509A8

#### HP 6TB Enterprise SATA 7200 HDD



Expand your workstation storage with the HP 4 TB SATA 7200 HDD,<sup>1</sup> an excellent solution for high capacity applications.

Product number: 3DH90AA

#### HP 16GB (1x16GB) DDR4-2666 nECC 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: 3PL82AA

#### HP Z2/Z4 Depth Adjust Fixed Rail Rack Kit



The Rack Mount Solution for the HP Z2 and Z4 Workstations features a locking tray that secures to the workstation and adjustable fixed-rails that attach to the rack. This kit offers a low-profile design with minimal impact on space constraints, allowing for high density rack configurations. Highlighting flexibility and safety, the kit provides an affordable and simple rack mount solution for use with any of HP's current entry-level workstations.

Product number: W6D62AT

#### HP 4 year Next Business Day Onsite Hardware Support w/ Defective Media Retention for Workstations



When hardware issues come up, the sooner you can get running again, the better. Have expertise at the ready with HP Hardware Next Business Day<sup>1</sup> Onsite Service with Defective Media Retention, and vastly improve your product uptime. With high-quality remote assistance or convenient onsite support available the next business day, help is there when you need it—so you can get back to work.

Product number: U1G56E (for 4 year platforms), U1G57E (for 5 year platforms)

## Messaging Footnotes

<sup>1</sup> HP Sure Start Gen4 is available on 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 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 (cache) is sold separately. Intel® Optane™ memory system acceleration does not replace or increase the DRAM in your system and requires configuration with an Intel® Core™ i+ processor.

<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 Workstation products equipped with Intel® 8th generation processors.

<sup>27</sup> HP Sure Run is available on HP Workstation products equipped with 8th generation Intel® or AMD® processors.

<sup>28</sup> HP Sure Recover is available on HP Workstations with 8th generation Intel® or AMD processors and requires an open, wired network connection. Not available on platforms with multiple internal storage drives, Intel® Optane™. You must back up important files, data, photos, videos, etc. before using HP Sure Recover to avoid loss of data.

<sup>29</sup> External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.

<sup>30</sup> Configurations with the Xeon E-2124G, E-2126G, E-2136, E-2144G, 2174G and E-2176G offered on the Mini Performance model only.

<sup>31</sup> 1TB, 4TB and 6TB Enterprise Class 3.5" HDDs.

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