



# HP Z2 Mini G4 Workstation

Get next-level performance with a remarkably small and versatile device that can handle single and multi-threaded software. With the ability to support the latest technology and workforce demands, it's the obvious choice for the modern workplace.

HP recommends Windows 10 Pro.



## Uncompromised power

Whether designing in 3D or running multiple applications at once, high-speed CPUs and optional NVIDIA® Quadro® P1000 graphics <sup>1</sup> optimize your performance. Plus, leading software certifications mean reliable performance throughout your workflow.

## A perfect fit for any environment

Improve your workspace with the stunning, versatile design. Mount under a desk, behind a display or in a rack. <sup>2</sup> Flexible I/O ports for peripheral and connectivity needs let you create the ideal setup—from the office to the shop floor to the data center.

## 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>3</sup> which protects against BIOS attacks. Plus, easily manage multiple devices with the HP Manageability Integration Kit Gen2 <sup>4</sup>.

## Featuring

- Support your unique user needs with a choice of Windows 10 Pro 64 or Linux® operating systems.<sup>5</sup>
- Now with the optional NVIDIA Quadro® P1000 graphics you get twice the performance over last generation and the ability to support more professional applications.<sup>6</sup>
- Get powerful performance on single and multi-threaded applications with the latest generation Intel® Xeon® and Intel® Core™ processors.<sup>7</sup>
- Drive up to six displays—four native and two additional with daisy chaining.<sup>8</sup>
- Get workstation-class performance in 2.7 liters.
- Secure your hardware with a built-in Kensington lock and a VESA sleeve that has port blocks.<sup>9</sup>
- 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>10</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>11</sup>
- Configure an optional 135W power supply for cost savings or optimize your configuration with an optional 230W power supply.
- With optional self-encryption drives, you have confidence knowing that if your storage device falls into the wrong hands, your valuable IP has enhanced protection.<sup>12</sup>

## HP Z2 Mini 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> Linux <sup>®</sup> Ready
Processor Family <sup>2,3</sup>	Intel <sup>®</sup> Pentium <sup>®</sup> Gold processor 8th Generation Intel <sup>®</sup> Core <sup>™</sup> i3 processor 8th Generation Intel <sup>®</sup> Core <sup>™</sup> i5 processor 8th Generation Intel <sup>®</sup> Core <sup>™</sup> i5+ processor 8th Generation Intel <sup>®</sup> Core <sup>™</sup> i7 processor 8th Generation Intel <sup>®</sup> Core <sup>™</sup> i7+ processor Intel <sup>®</sup> Xeon <sup>®</sup> processor (E-2176G, E-2174G, E-2146G, E-2144G, E-2136, E-2126G, E-2124G, E-2104G)
Processors <sup>2,3,4,5,6,21,24,34</sup>	Intel <sup>®</sup> Pentium <sup>®</sup> Gold G5400 with Intel <sup>®</sup> HD Graphics 610 (3.7 GHz base frequency, 4 MB cache, 2 cores) Intel <sup>®</sup> Core <sup>™</sup> i3-8100 with Intel <sup>®</sup> HD Graphics 630 (3.6 GHz, 6 MB cache, 4 cores) Intel <sup>®</sup> Core <sup>™</sup> i5 8500 vPro <sup>™</sup> with Intel <sup>®</sup> HD Graphics 630 (3 GHz base frequency, up to 4.1 GHz with Intel <sup>®</sup> Turbo Boost Technology, 9 MB cache, 6 cores) Intel <sup>®</sup> Core <sup>™</sup> i5 8600 vPro <sup>™</sup> with Intel <sup>®</sup> HD Graphics 630 (3.1 GHz base frequency, up to 4.3 GHz with Intel <sup>®</sup> Turbo Boost Technology, 9 MB cache, 6 cores) Intel <sup>®</sup> Core <sup>™</sup> i5+ 8500 vPro <sup>™</sup> (Core <sup>™</sup> i5 and 16 GB Intel <sup>®</sup> Optane <sup>™</sup> memory) with Intel <sup>®</sup> HD Graphics 630 (3 GHz base frequency, up to 4.1 GHz with Intel <sup>®</sup> Turbo Boost Technology, 9 MB cache, 6 cores) Intel <sup>®</sup> Core <sup>™</sup> i5+ 8600 vPro <sup>™</sup> (Core <sup>™</sup> i5 and 16 GB Intel <sup>®</sup> Optane <sup>™</sup> memory) with Intel <sup>®</sup> HD Graphics 630 (3.1 GHz base frequency, up to 4.3 GHz with Intel <sup>®</sup> Turbo Boost Technology, 9 MB cache, 6 cores) Intel <sup>®</sup> Core <sup>™</sup> i7 8700 vPro <sup>™</sup> with Intel <sup>®</sup> HD Graphics 630 (3.2 GHz base frequency, up to 4.6 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores) Intel <sup>®</sup> Core <sup>™</sup> i7+ 8700 vPro <sup>™</sup> (Core <sup>™</sup> i7 and 16 GB Intel <sup>®</sup> Optane <sup>™</sup> memory) with Intel <sup>®</sup> HD Graphics 630 (3.2 GHz base frequency, up to 4.6 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2104G vPro <sup>™</sup> with Intel <sup>®</sup> HD Graphics P630 (3.2 GHz, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2104G with Intel <sup>®</sup> HD Graphics P630 (3.2 GHz, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2124G (3.4 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2124G vPro <sup>™</sup> (3.4 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2126G (3.3 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2126G vPro <sup>™</sup> (3.3 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2136 (3.3 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2136 vPro <sup>™</sup> (3.3 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2144G (3.6 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2144G vPro <sup>™</sup> (3.6 GHz base frequency, up to 4.5 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2174G (3.8 GHz base frequency, up to 4.7 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2174G vPro <sup>™</sup> (3.8 GHz base frequency, up to 4.7 GHz with Intel <sup>®</sup> Turbo Boost Technology, 8 MB cache, 4 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2176G (3.7 GHz base frequency, up to 4.7 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores) Intel <sup>®</sup> Xeon <sup>®</sup> E-2176G vPro <sup>™</sup> (3.7 GHz base frequency, up to 4.7 GHz with Intel <sup>®</sup> Turbo Boost Technology, 12 MB cache, 6 cores)
Chipset	Intel <sup>®</sup> C246
Maximum Memory	32 GB DDR4-2666 ECC SDRAM; 32 GB DDR4-2666 non-ECC SDRAM <sup>18</sup> (Transfer rates up to 2666 MT/s.)
Memory Slots	2 SODIMM
Internal Storage	500 GB up to 1 TB 7200 rpm SATA <sup>8</sup> 2 TB 5400 rpm SATA <sup>8</sup> 256 GB up to 1 TB HP Z Turbo Drive G2 PCIe <sup>®</sup> NVMe <sup>™</sup> SSD <sup>8,35</sup> 256 GB SATA SSD <sup>8</sup>
Optical Storage	Ultra-slim external DVD-Writer <sup>9</sup>
Available Graphics	Integrated: Intel <sup>®</sup> UHD Graphics 630; Intel <sup>®</sup> UHD Graphics P630 <sup>10,11</sup> Discrete: NVIDIA <sup>®</sup> Quadro <sup>®</sup> P1000 (4 GB GDDR5 dedicated); AMD Radeon <sup>™</sup> Pro WX 4150 (4 GB GDDR5 dedicated); NVIDIA <sup>®</sup> Quadro <sup>®</sup> P600 (4 GB GDDR5 dedicated) <sup>12,25</sup> (Configurations with NVIDIA <sup>®</sup> or AMD graphics are configured on the Mini Performance model only.)
Audio	Conexant CX20632-31Z, 1.5W internal mono speaker
Networking	LAN: Integrated Intel <sup>®</sup> I219-LM PCIe <sup>®</sup> GbE WLAN: Intel <sup>®</sup> Dual Band Wireless-AC 9560 802.11a/b/g/n/ (2x2) Wi-Fi <sup>®</sup> and Bluetooth <sup>®</sup> 5 Combo
Expansion Slots	1 M.2 PCIe 3 x1
Ports and Connectors	Side: 1 headphone/microphone combo; 2 USB 3.0 (1 charging); 1 USB 3.1 Gen 2 Type-C <sup>™</sup> (charging) <sup>3</sup> Back: 1 RJ-45; 2 DisplayPort <sup>™</sup> 1.2; 2 USB 3.0 <sup>4,22</sup> Optional: Flex I/O <sup>27</sup> (The Intel <sup>®</sup> Core <sup>™</sup> X-Series processor configurations only have one RJ45 port available. The serial port is optional.)

Drive Bays (Internal)	One 2.5"; M.2 NVME 2280 SSD
Input Device	HP USB Business Slim Keyboard; HP Wireless Business Slim Keyboard; USB Smart Card (CCID) keyboard <sup>9</sup> HP USB 1000 dpi Laser Mouse; HP USB Optical Mouse <sup>9</sup>
Software	HP Client Security Software; HP PC Hardware Diagnostics UEFI; HP Performance Advisor; HP Remote Graphics Software (RGS) 7.1; HP Sure Recover; HP Manageability Integration Kit Gen2 <sup>15,16,27,32</sup>
Security	HP Keyed Cable Lock Kit; HP Client Security Suite Gen 4; HP Sure Start Gen 4; HP Sure Run; HP Sure Click; HP BIOSphere Gen4 <sup>9,26,28,29,30,31</sup>
Power	135 W external power adapter, up to 89% efficiency, active PFC; 200 W external power adapter, up to 89% efficiency, active PFC; 230 W external power adapter, up to 88% efficiency, active PFC <sup>23</sup>
Dimensions (W x D x H)	8.5 x 8.5 x 2.28 in 21.6 x 21.6 x 5.8 cm (Standard desktop orientation.)
Weight	Starting at 4.5 lb Starting at 2.04 kg
Energy Efficiency Compliance	ENERGY STAR <sup>®</sup> certified and EPEAT <sup>®</sup> registered configurations available <sup>17</sup>
Environmental Certification	Low halogen <sup>33</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.

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### Recommended accessories and services (not included)

HP Z27n G2 27-inch Display



Be a productive powerhouse with the sleek QHD HP Z27n G2 27-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: 1J510A8

HP 16GB (1x16GB) DDR4-2666 nECC SODIMM 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: 3TQ36AA

HP Z2 Mini G4 VESA Sleeve



HP Sleeves and Covers feature modern designs that can be as bold or as understated as you want to make them. The cases are constructed from durable, high-quality materials designed to provide the utmost protection for your device. Product number: 4KY83AA

HP 1TB 7200 RPM SATA SFF 1st HDD



Maximize performance of HP Business PCs and meet your storage demands with high-capacity drives. Serial ATA (NCQ and Smart IV) 6.0 Gb/s Hard Drives are available in the following models: 2.5" 7.2K – 1TB, 500 GB\*\* and 2.5" 10K - 250GB\*\* and 500GB.\*\* Product number: TOK74AA

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> Optional or configurable feature.
- <sup>2</sup> Mounting hardware sold separately.
- <sup>3</sup> HP Sure Start Gen4 is available on HP Workstation products equipped with 8th generation Intel® or AMD processors.
- <sup>4</sup> HP Manageability Integration Kit Gen2 can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>.
- <sup>5</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>6</sup> Optional or configurable feature
- <sup>7</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>8</sup> 6 display solution is achieved using a combination of Intel® HD graphics and NVIDIA Quadro® graphics and is ONLY supported on Windows 10.
- <sup>9</sup> Lock sold separately or as an optional feature. Mounting hardware sold separately.
- <sup>10</sup> HP Sure Start Gen4 is available on HP Workstation products equipped with 8th generation Intel® or AMD processors.
- <sup>11</sup> Sold separately or as an optional feature.
- <sup>12</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>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>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 system 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> Non-ECC memory is supported on all processors. ECC is only enabled on Xeon, Pentium and i3 core processors.
- <sup>19</sup> External power supplies, power cords, cables and peripherals are not low halogen. Service parts obtained after purchase may not be low halogen.
- <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™ 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>22</sup> 1 Flexible I/O port with options: DP 1.2, HDMI, VGA, USB 3.1 Type C with Alt-DP mode, Thunderbolt 3.0, RJ-45 Ethernet (2nd LAN) or None
- <sup>23</sup> 200W Power Supply and 230 W external power adapter in Performance Model only.
- <sup>24</sup> Intel® Optane™ available Fall 2018.
- <sup>25</sup> AMD Radeon™ Pro WX 4150 available Fall 2018.
- <sup>26</sup> HP BIOSphere Gen4 features may vary depending on the PC platform and configurations requires 8th Gen Intel® processors.
- <sup>27</sup> HP Manageability Integration Kit can be downloaded from <http://www8.hp.com/us/en/ads/clientmanagement/overview.html>
- <sup>28</sup> HP Client Security Suite Gen 4 requires Windows and Intel® or AMD 8th generation processors.
- <sup>29</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>30</sup> HP Sure Start Gen4 is available on HP Workstation products equipped with Intel® 8th generation processors.
- <sup>31</sup> HP Sure Run is available on HP Workstation products equipped with 8th generation Intel® or AMD® processors.
- <sup>32</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>33</sup> External power supplies, power cords, cables and peripherals are not Low Halogen. Service parts obtained after purchase may not be Low Halogen.
- <sup>34</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>35</sup> HP Z2 Mini G4 Workstation can only support one storage device: either one SATA or one NVMe, not both.
- <sup>37</sup> 1 extra DisplayPort™, 1 USB Type-C™ on performance model.

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