

**Data sheet**

# HP Z840 Workstation



## QEB2016-A

Push your computing boundaries with the HP Z840 Workstation that helps you keep up with your biggest projects. Built for high-end computing and visualization, it delivers outstanding performance in one of the industry's most expandable chassis.



HP Z840 Desktop Tower Workstation

### **Prepare to be spectacular**

The HP Z840 Workstation, HP's highest performing workstation gets the best of HP Z DNA with incredible processing power, professional graphics, maximized memory, and internal storage capacity that helps you create work that makes a statement.

### **Keep going**

Reach your goals with the HP Z840 Workstation featuring uncompromised reliability, a tool-less chassis to facilitate upgrades, a lockable side panel, and handles to move the system around.

### **Featuring:**

- Take productivity up a notch with the ability to do more thanks to NVIDIA® professional graphics cards.
- A new tool-free chassis boasts low acoustics, dual integrated Gb Ethernet, aluminum side panels, handles for lifting, and is 5U rack mountable—all in an elegant industrial design.
- Reduce boot up, calculation, and graphics response and revolutionize how your HP Z840 handles large files with the HP Z Turbo Drive, a remarkably fast and innovative storage solution.



# Specifications

## HP Z840 Workstation

F5G73AV

<b>Operating System<sup>1</sup></b>	Windows 10 Enterprise 64-bit Preloaded 64-bit SDC 5.x with Office Suite (Default)								
<b>Processor<sup>2,3</sup></b>	Intel® Xeon® E5-2650 v3 64-bit 2.50 GHz/ 3.30 GHz Turbo, 10 Cores/ 20 Threads with 25 MB cache 2133 MHz RAM, Intel® C612 Chipset								
<b>Memory</b>	64 GB DDR4-2133 1-CPU Registered ECC (8x8 GB DIMMs); 16 DIMM Slots for DDR4 ECC Memory; max capacity 1 TB. (Use G8X65AV for 1 CPU Base Configuration; Use K6D85AV when configured with 2CPU Processor Upgrades.)								
<b>Storage<sup>4</sup></b>	2 X 2 TB 7200 RPM 6 GB/sec 3.5" SATA with 64 MB cache								
<b>Graphics</b>	NVIDIA® Quadro® M4000 8 GB GDDR5 VRAM, (Direct X 12, Shader Model 5.0, OpenGL 4.5); 1664 NVIDIA® CUDA™ Parallel Processor Cores; 120W; Supports up to 4 independent monitors via (4) DP connectors, (2) DP to DVI adapters included; (1) Stereo (3-pin mini DIN)								
<b>Power Supply</b>	Dual voltage (110-240V 50/60 Hz) autosensing								
<b>Warranty</b>	4 year next business day on-site with storage media retention								
<b>Energy Efficiency Compliance</b>	EPEAT® Gold registered								
<b>Security</b>	Trusted Computing Group certified Trusted Platform Module (TPM) version 1.2 - Infineon SLB9635TT1.2, BIOS protection as identified in NIST SP 800-147, BIOS settings comply.								
<b>Removeable Media<sup>6</sup></b>	HP Internal SATA Slim SuperMulti Optical Drive: DVD+/-R 8X; DVD+/-RW 8X; DVD+/-R DL 8X; CD-R 24X; CD-RW 24X; 4.7GB single layer 8.5GB dual layer								
<b>Audio</b>	Realtek ALC221 HD Integrated Audio - <b>Front:</b> (1) Headset and (1) Microphone; <b>Rear:</b> (1) Line-in (can be re-tasked as microphone), (1) Line-out								
<b>Communications</b>	Dual (2) Integrated Intel® I218LM PCIe 10/100/1000 GbE NICs								
<b>I/O Ports and Connectors</b>	<b>Front:</b> (4) USB 3.0, (1) combo headset, (1) microphone <b>Rear:</b> (4) USB 3.0, (2) USB 2.0, (1) Serial, (1) Line-in (can be re-tasked as microphone), (1) Line-out, PS2 Keyboard and Mouse, (2) RJ45; Internal: (2) USB 2.0; (1) USB 3.0								
<b>Dimensions (H x W x D)</b>	17.5 x 8.0 x 20.7 in								
<b>Weight</b>	Typical: 50.4 lbs / Maximum: 64.3 lbs Depends on configuration								
<b>Keyboard</b>	HP USB 104-key enhanced keyboard with integrated FIPS 201-1 CAC reader								
<b>Mouse</b>	HP USB 2-button optical scrolling mouse								
<b>Options</b>	<table border="1"> <thead> <tr> <th>Part Number</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>N2G58AV#ABA</td> <td>Windows 7 Enterprise 64-bit (available through downgrade rights from Windows 10 Enterprise 64-bit)<sup>7</sup> 64-bit SDC 3.x with Office Suite</td> </tr> <tr> <td>N2G67AV#ABA</td> <td>OEM Windows 10 Pro 64-bit<sup>1</sup> (Non-Network Use Only) - USAF will allow system to be restored through restore partition that resides on hard drive. In the event of a hard drive failure, the USAF will allow restore media to be provided without customer requesting it.</td> </tr> <tr> <td>N2G58AV#ABA / G9P47AV#ABA</td> <td>OEM Windows 7 Professional 64-bit (available through downgrade rights from Windows 10 Pro 64-bit)<sup>8</sup> (Non-Network Use Only)</td> </tr> </tbody> </table>	Part Number	Description	N2G58AV#ABA	Windows 7 Enterprise 64-bit (available through downgrade rights from Windows 10 Enterprise 64-bit) <sup>7</sup> 64-bit SDC 3.x with Office Suite	N2G67AV#ABA	OEM Windows 10 Pro 64-bit <sup>1</sup> (Non-Network Use Only) - USAF will allow system to be restored through restore partition that resides on hard drive. In the event of a hard drive failure, the USAF will allow restore media to be provided without customer requesting it.	N2G58AV#ABA / G9P47AV#ABA	OEM Windows 7 Professional 64-bit (available through downgrade rights from Windows 10 Pro 64-bit) <sup>8</sup> (Non-Network Use Only)
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Options (continued)	Product Number	Description
	G8W11AV / G8W13AV / G8U76AV	OEM Linux® Red Hat® Enterprise Workstation or Desktop with all device drivers for full functionality; (1-year maintenance support) <b>USB Keyboard included with Red Hat Enterprise Linux.</b>
	Use G8X66AV for 1 CPU / Use G8X79AV for 2 CPUs	128 GB DDR4-2133 (8x16 GB) Registered RAM
	Use G8X68AV for 1 CPU / Use G8X81AV for 2 CPUs	256 GB DDR4-2133 (8x32 GB) Load Reduced Registered RAM <b>(Maximum supported memory for Windows 7 Professional 64-bit is 192 GB, configure with Windows 10 64-bit.)</b>
	J6F62AV	Intel® E5-2687W v3 64-bit 3.1Ghz/ 3.5 GHz Turbo, 10 Cores/ 20 Threads with 25 MB cache 2133 MHz RAM
	J6F61AV	Intel® E5-2695 v3 64-bit 2.3Ghz/ 3.3 GHz Turbo, 14 Cores/ 28 Threads with 35 MB cache 2133 MHz RAM
	J6F70AV / J6F89AV	Dual Intel® Xeon® E5-2650 v3 64-bit 2.30Ghz/ 3.30 GHz Turbo, 10 Cores/ 20 Threads with 25 MB cache 2133 MHz RAM
	J6F62AV / J6F81AV	Dual Intel® E5-2687W v3 64-bit 3.1Ghz/ 3.5 GHz Turbo, 10 Cores/ 20 Threads with 25 MB cache 2133 MHz RAM
	J6F61AV / J6F80AV	Dual Intel® E5-2695 v3 64-bit 2.3Ghz/ 3.3 GHz Turbo, 14 Cores/ 28 Threads with 35 MB cache 2133 MHz RAM
	M6V48AV / C7T72AV	NVIDIA® Quadro® M5000 8 GB GDDR5 VRAM, (Direct X 12, Shader Model 5.0, OpenGL 4.5); 2048 NVIDIA® CUDA™ Parallel Processor Cores; 150W; Supports up to 5 independent monitors via (1) DVI-I and (4) DP connectors); (1) DP to DVI adapter included; (1) Stereo (3-pin mini DIN)
	L2K00AV / C7T72AV	NVIDIA® Quadro® M6000 12 GB GDDR5 VRAM, (Direct X 12, Shader Model 5.0, OpenGL 4.5); 3072 NVIDIA® CUDA™ Parallel Processor Cores; 250W; Supports up to 5 independent monitors via (1) DVI-I and (4) DP connectors); (1) DP to DVI adapter included; (1) Stereo (3-pin mini DIN)
	Use J1Q41AV when configured with NVIDIA® Quadro M6000	NVIDIA® Tesla® K40 Compute Processor; 12 GB GDDR5; 2880 CUDA® cores; Power Consumption: ~235 Watts; CUDA,® OpenACC, OpenCL 1.2 API support includes: C, C++, Java, Python, Fortran; PCI Express Gen2 ×16; Form Factor: 4.376 inches by 10.5 inches, Dual Slot <b>(Use with NVIDIA® Quadro M6000, graphics upgrade)</b>
	J3K79AV / J3L15AV	Upgrade to 2 X 2 TB 7200rpm SATA hard drives with BOOT 256GB SATA SSD with Integrated Controller that supports RAID 0,1,5,10 (included in base). Option not available with removable hard drives.
	J3K80AV / J3L15AV	Upgrade to 2 X 2 TB 7200rpm SATA hard drives with BOOT 512GB SATA SSD with Integrated Controller that supports RAID 0,1,5,10 (included in base). Option not available with removable hard drives.
	G8U90AV	Add Second HP Internal Slim SATA SuperMulti Optical Drive: DVD+/-R 8X; DVD+/-RW 8X; DVD+/-R DL 8X; CD-R 24X; CD-RW 24X; 4.7GB single layer 8.5GB dual layer
	F5G80AV / G8U91AV	Dual HP SATA 9.5mm Slim BDXL Blu-ray Writer (replaces standard optical drive)
	J4Y57AV / J3L15AV / J3L38AV	4 each 2 TB drives - SATA 6Gb/s 7,200 rpm, RAID 5
	J3K79AV / J3K96AV / J3L17AV	2 each 4TB drives - SATA 6Gb/s 7,200 rpm, 256GB SATA 6Gb/s SSD



- 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 10 is automatically updated, which is always enabled. ISP fees may apply and additional requirements may apply over time for updates. See <http://www.microsoft.com/>.
- 2 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 is not a measurement of higher performance.
- 3 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.
- 4 For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB of system disk is reserved for Windows 7 and higher system recovery software.
- 5 EPEAT® registered where applicable. EPEAT registration varies by country. See <http://www.epeat.net> for registration status by country.
- 6 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.
- 7 This system is preinstalled with Windows 7 Enterprise software and also comes with a license and media for Windows 10 Enterprise software. 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.
- 8 This system is preinstalled with Windows 7 Professional software and also comes with a license and media for Windows 10 Pro software. 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.

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