HP recommends Windows.

**HP Z820 Workstation**

Ultimate performance for ultimate projects.

**Built for high-end computing and visualization.**

The dual-processor HP Z820 Workstation delivers outstanding performance, award-winning industrial design, and tool-free serviceability in the industry’s most expandable chassis. With next generation Intel® Xeon® processors, support for up to 16 processing cores, and the latest professional graphics, you’ll tackle even the most demanding projects like never before.

**Unmatched Design. Inside and Out.**

With its expandable design, the HP Z820 Workstation gives you the confidence to produce your best work. Designed for a wide-range of needs, the HP Z820 offers enhanced tool-free access and unbelievable power at whisper-quiet levels. The result is unparalleled design power in a system that is sleek and uncluttered, inside and out.

**Multitasking Made Easy.**

The HP Z820 Workstation employs a variety of Intel® Xeon® E5-2600 processors¹ ² ³ that enable next generation PCI Express technology. With support for 2 processors, the HP Z820 can operate with up to 16 processing cores, delivering ultimate performance to help you accomplish more every minute. Featuring the Xeon® C600 series chipset, LSI SAS 2308 controller, and dual Quick Path Interconnects between the processors, the two work together to help you work more effectively than ever before.

**Ultra-Powerful Visuals and High Performance Computing.**

Built to support next generation PCIe Gen3 graphics from AMD and NVIDIA, the HP Z820 Workstation currently offers a wide range of cards from Pro 2D to ultra high-end 3D graphics to get the job done. With dual graphics processor support, the HP Z820 can drive up to 8 displays, giving you the power and space you need to multitask like a pro. Plus, get the highest performing GPU computing solutions available in the Z family, like NVIDIA’s Maximus, on the HP Z820.
HP Z820 Workstation

Form Factor
Rackable minitower

Available Operating Systems
Windows® 7 Professional 32-bit
Windows® 7 Professional 64-bit
Windows® 7 Ultimate 64-bit
HP Linux Installer Kit

Red Hat Enterprise Linux Desktop/Workstation(*)

1 One year paper license; no preinstalled OS)

Available Processors

<table>
<thead>
<tr>
<th>Processor</th>
<th>GHz</th>
<th>Cache</th>
<th>Memory</th>
<th>Cores</th>
<th>Hyper-Threading</th>
<th>Intel® vPro™ Technology</th>
<th>Intel® Turbo Boost Technology</th>
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</thead>
<tbody>
<tr>
<td>Intel® Xeon® Processor ES-2687</td>
<td>3.1</td>
<td>20 MB</td>
<td>1600 MHz</td>
<td>8</td>
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<td>Y</td>
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<td>1333 MHz</td>
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<tr>
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<td>1066 MHz</td>
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<td>N</td>
<td>N</td>
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</tbody>
</table>

Chipset
Intel® E602 Chipset

Memory
16 DIMM slots, up to 512 GB, 8-channel ECC DDR3, up to 1600 MHz, 4 channels per CPU

Drive Controllers
Integrated 2-channel SATA 6 Gb/s controller, RAID 0, 1, capable; Integrated 4-channel SATA 3 Gb/s controller, RAID 0, 1, 5, 10, capable; Integrated 8-channel SAS 6 Gb/s controller, RAID 0, 1, 10, optional; Optional LSI 9260-8i 8-port 6 Gb/s SAS HW RAID 0, 1, 5, 10, capable

Storage
Up (to) 3.5-inch 7200 rpm SATA drives: 250, 500 GB, 1, 2 TB; Up to (4) 3 TB, 14 TB max; Up to (5) 2.5-inch 10k rpm SATA drives: 300 GB SFF, 1.5 TB max; Up (to) 6 (2.5-inch 10k rpm SATA drives: 250, 500, 1000 GB SFF, 6 TB max; Up to (6) 2.5-inch 10k rpm SAS drives: 300, 600 GB SFF, 3.6 TB max; Up to (5) 3.5-inch 15k rpm SAS drives: 300, 450, 600 GB, 3 TB max; Up to (6) 2.5-inch SATA solid state drives: 128, 160, 256, 300 GB, 1.8 TB max; Up to (1) 2.5-inch SATA solid state SED drives: 256 GB, 256 GB max; Up to (1) 3.5-inch SATA SED hard drive: 500 GB, 500 GB max

Optical Storage
DVD-ROM, DVD+/-RW Super-Multi and Slot-Load, Blu-ray Writer

Drive Bays
3 external 5.25-inch bays, 4 internal 3.5-inch bays

Expansion Slots
2 PCI Express Gen3 x16; 1 PCI Express Gen3 x8 (Available only with 2nd CPU); 1 PCI Express Gen3 x16 mechanical/x8 electrical; 1 PCI Express Gen3 x8 mechanical/x4 electrical; 1 PCI Express Gen2 x8 mechanical/x4 electrical; 1 Legacy PCI

Available Graphics
Professional 2D: NVIDIA NVS 310, NVIDIA NVS 310, NVIDIA Quadro NVS 450
Entry 3D: NVIDIA Quadro 410, AMD FirePro™ V900, NVIDIA Quadro 600, AMD FirePro™ V9900
Mid-range 3D: NVIDIA Quadro 2000, AMD FirePro™ V5900
High-end 3D: NVIDIA Quadro 4000, AMD FirePro™ V7900, NVIDIA Quadro 5000, NVIDIA Quadro K5000, NVIDIA Quadro 6000, NVIDIA Tesla C2075

Audio
Integrated Intel/Realtek HD ALC662 Audio, optional HP Thin USB Powered Speakers

Network
Dual integrated Intel GoE LAN; InfiniSIon T1 120; Controller: Optional Broadcom NIC; Optional Intel NIC

Ports
Front: 2 USB 3.0, 1 USB 2.0, 1 IEEE 1394a standard, 1 microphone in, 1 headphone out, HP 22-in-1 Media Card Reader (optional) Rear: 2 USB 3.0, 4 USB 2.0, 1 IEEE 1394a, 1 audio in, 1 audio out, 1 microphone in, 2 PS/2, 2 RJ-45 to integrated Gigabit LAN, 1 serial Internal: 6 USB 2.0 ports available by three 2x5 headers

Input Devices
HP PS/2 standard keyboard, HP USB standard keyboard, HP USB Smart Card Keyboard, HP PS/2 optical scroll mouse, HP USB 2-button optical scroll mouse, HP USB 3-button optical mouse, USB SpaceExplorer, USB SpacePilot, USB Laser Mouse

Dimensions (H x W x D)
17.5 x 8.0 x 20.7 in (44.4 x 20.3 x 52.5 cm)

Power Supply
850W 88% efficient wide-ranging, active Power Factor Correction or 1125W 90% efficient wide-ranging, active Power Factor Correction

Compatible Displays
HP DreamColor LP2480zx Professional Display (24-inch diagonal widescreen), HP ZR30w 30-inch 5-IPS LCD Monitor, HP ZR240w 24-inch LED Backlit IPS Monitor, HP ZR2440w 24-inch LED Backlit IPS Monitor, HP ZR2475w 24-inch Widescreen LCD Monitor, HP ZR2420w 21.5-inch LED Backlit IPS Monitor, HP ZR2604w 20-inch LED Backlit IPS Monitor

Warranty
Limited three-year Mon-Fri 8-5 next business day, parts, labor and 24x7 phone support, terms and conditions may vary.

Screen images courtesy of Autodesk.

1. Multi-Core technologies are designed to improve performance of multithreaded software products and hardware-aware multitasking operating systems and may require appropriate operating system software for full benefits. Not all customers or software applications will necessarily benefit from use of these technologies.

2. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 12-bit operations) in 32-bit operating systems.

3. Intel’s number is not a measurement of higher performance.

4. The specifications shown in this column represent the following: (all core maximum turbo steps, one core maximum turbo steps). Turbo boost stepping occurs in 100MHz increments. Processors that do not have turbo functionality are denoted as N/A. Intel® Turbo Boost technology requires a PC with a processor with Intel® Turbo Boost capability. Intel® Turbo Boost performance varies depending on hardware, software, and overall system configuration.

5. Please visit intel.com/technology/turboboost for more information.

6. Each processor supports up to 4 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel.

7. SATA hardware RAID is not supported on Linux systems. The Linux kernel, with built-in software RAID, provides excellent functionality and performance. It is a good alternative to hardware-based RAID.


9. For hard drives, 1 GB = 1 billion bytes, TB = 1 trillion bytes. Actual formatted capacity is less.

10. Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copyright protected materials. Intended for creation and storage of your original material and other lawful uses. Note that DVD-RAM cannot read or write to 2.6 GB Single Sided/5.2 GB Double Sided – Version 1.0 media.

11. As Blu-ray contains new technologies, 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.

12. AMD Graphics are not supported when there are greater than 32 GB of system memory present.

13. NVIDIA Tesla C2075 requires the 1125W power supply.

14. HP Care Pack Services extend service contracts beyond the standard warranties. Service starts from date of hardware purchase. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at hp.com/go/carepack. Service levels and response times for HP Care Packs may vary depending on your geographic location.

Learn more
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