Data sheet

HP Z620 Workstation

More versatile than ever before.

HP recommends Windows.

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With up to 24 discrete processor cores, the HP Z620 Workstation packs a ton of computing and visualization power into a quiet, compact footprint. This dual-socket system helps you boost productivity with next-generation Intel® Xeon processors and support for multiple displays.

The performance you demand.

Get massive system performance in a small footprint with the next evolution in system architecture, setting the standard for versatility with support for both Intel® Xeon® processor E5-2600 v2 and E5-1600 v2 families.[1] Now with up to 24 cores, the HP Z620 powerhouse supports a full range of processors, to help you get more done every minute.

Support up to 192 GB of the latest generation of system memory with 12 DIMM slots and integrated 1866 MHz DDR3 memory subsystem.[2] Ideal for complex data sets and the demands of a 64-bit environment. Take advantage of an 800 W 90% efficient power supply perfect for high-end graphics. Connect in a flash with 4X USB 3.0 bandwidth on an optional high-performance Thunderbolt™ 2.0 port[3] on the HP Z620.

Bring your ideas to life, faster.

The HP Z620 offers a huge variety of professional graphics from NVIDIA and AMD, including Pro 2D to Extreme 3D. Integrate PCI express Gen3 graphics technology and double the bandwidth in and out of your card.[4] Access high-performance applications, including 2D and 3D video, on-site or from a remote location with HP Remote Graphics software.[5] Increase productivity and spread out with the freedom of seeing and doing more all at once with support for multiple displays at peak HD resolutions.[6]

Modify your machine.

Build the HP Z620 Workstation the way you want with multiple SATA and SAS RAID configuration options that support a wide range of high-performance, high capacity storage solutions.

HP Z620 Workstation

1. 2 External 5.25" Bays (shown with optional slot-load optical drive)
2. Power Button
3. Front I/O: 1 USB 2.0, 2 USB 3.0,1 Headphone, 1 Microphone, 1 1394a

HP recommends Windows.

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Form Factor	Rackable minitower
Available Operating Systems	Windows 7 Professional 32-bit* Windows 7 Professional 64-bit* Windows 7 Ultimate 64-bit* Windows 8.1 64-bit** Windows 8.1 Pro 64-bit** Windows 8.1 Pro Downgrade to Windows 7 Professional 32-bit*** Windows 8.1 Pro Downgrade to Windows 7 Professional 64-bit*** HP Linux Installer Kit

Available Processors[1,7,8,9]

Processor	GHz	Cache	Memory	Cores	Hyper-Threading	Intel® vPro™ Technology	Intel® Turbo Boost Technology[10]
Intel® Xeon® Processor E5-2643	3.3	10 MB	1600 MHz	4	Y	Y	1, 2
Intel Xeon Processor E5-2620	2.0	15 MB	1333 MHz	6	Y	Y	3, 5
Intel Xeon Processor E5-1620	3.6	10 MB	1600 MHz	4	Y	Y	2,3
Intel Xeon Processor E5-1603	2.8	10 MB	1066 MHz	4	N	Y	N/A
Intel Xeon Processor E5-2697 v2	2.7	30 MB	1866 MHz	12	Y	Y	3, 8
Intel Xeon Processor E5-2695 v2	2.4	30 MB	1866 MHz	12	Y	Y	4, 8
Intel Xeon Processor E5-2690 v2	3.0	25 MB	1866 MHz	10	Y	Y	3, 6
Intel Xeon Processor E5-2680 v2	2.8	25 MB	1866 MHz	10	Y	Y	8, 8
Intel Xeon Processor E5-2670 v2	2.5	25 MB	1866 MHz	10	Y	Y	4, 8
Intel Xeon Processor E5-2667 v2	3.3	25 MB	1866 MHz	8	Y	Y	3, 7
Intel Xeon Processor E5-2660 v2	2.2	25 MB	1866 MHz	10	Y	Y	4, 8
Intel Xeon Processor E5-2650 v2	2.6	20 MB	1866 MHz	8	Y	Y	4, 8
Intel Xeon Processor E5-2643 v2	3.5	25 MB	1866 MHz	6	Y	Y	1, 3
Intel Xeon Processor E5-2640 v2	2.0	20 MB	1600 MHz	8	Y	Y	3, 5
Intel Xeon Processor E5-2637 v2	3.5	15 MB	1866 MHz	4	Y	Y	1, 3
Intel Xeon Processor E5-2630 v2	2.6	15 MB	1600 MHz	6	Y	Y	3, 5
Intel Xeon Processor E5-2620 v2	2.1	15 MB	1600 MHz	6	Y	Y	3, 5
Intel Xeon Processor E5-2609 v2	2.5	10 MB	1333 MHz	4	N	Y	N/A
Intel Xeon Processor E5-2603 v2	1.8	10 MB	1333 MHz	4	N	Y	N/A
Intel Xeon Processor E5-1680 v2	3.0	25 MB	1866 MHz	8	Y	Y	4, 9
Intel Xeon Processor E5-1660 v2	3.7	15 MB	1866 MHz	6	Y	Y	2, 3
Intel Xeon Processor E5-1650 v2	3.5	12 MB	1866 MHz	6	Y	Y	1, 4
Intel Xeon Processor E5-1620 v2	3.7	10 MB	1866 MHz	4	Y	Y	0, 2
Intel Xeon Processor E5-1607 v2	3.0	10 MB	1600 MHz	4	N	Y	N/A

Chipset	Intel® C602 Chipset
Memory[11]	Up to 12 DIMM slots with 2 CPUs, up to 192 GB, 8-channel ECC DDR3 1866 MHz; 4 channels per CPU
Drive Controllers	Integrated 6-channel SATA controller: 2 ports 6 Gb/s + 4 ports 3 Gb/s, RAID 0, 1, 5, 10 capable; Optional SAS controllers: LSI 9217-4i4e 8-port SAS/SATA 6 Gb/s, RAID 0, 1, 10. LSI 9270-8i SAS/SATA, 8-port 6 Gb/s HW RAID 0, 1, 5, 10 capable
Storage[12,13]	Up to (4) 3.5-inch 7200 rpm SATA drives: 500 GB, 1, 2, 3 TB, 12 TB max; Up to (4) 2.5-inch 10K rpm SATA drives: 250, 500 GB, 1 TB, 4 TB max; Up to (4) 2.5-inch 10K rpm SAS drives: 300, 600, 900 GB, 1.2 TB, 4.8 TB max; Up to (4) 3.5-inch 15K rpm SAS drives: 300, 450, 600 GB, 2.4 TB max; Up to (4) 2.5-inch SATA solid state drives: 128, 180, 240, 256, 480, 512 GB, 1 TB, 4 TB max; Up to (1) 2.5-inch SATA self-encrypting solid state boot drive (SED SSD): 256 GB; Up to (1) 2.5-inch SATA self-encrypting hard drive (SED HDD): 500 GB, 500 GB max; Up to (1) PCIe SSD: HP Z Turbo Drive 256 GB, HP Z Turbo Drive 512 GB, Fusion ioFX 410 GB PCIe Accelerator**** Note: Fourth drive occupies one external 5.25-inch bay
Optical Storage[14,15]	DVD-ROM, DVD+/-RW, Blu-ray Writer, 15-in-1 Media Card Reader
Drive Bays	2 external 5.25-inch bays, 3 internal 3.5-inch bays, Note: Fourth HDD occupies one external bay
Expansion Slots	2 PCI Express Gen3 x16; 1 PCI Express Gen3 x8, 1 PCI Express Gen2 x8 mechanical/x4 electrical; 1 PCI Express Gen2 x4 mechanical/x1 electrical; 1 Legacy PCI
Available Graphics	Professional 2D: NVIDIA NVS 310, NVIDIA NVS 315, NVIDIA NVS 510 Entry 3D: NVIDIA Quadro 410, NVIDIA Quadro K600, AMD FirePro™ V3900 Mid-range 3D: NVIDIA Quadro K2000 High-end 3D: NVIDIA Quadro K4000, AMD FirePro™ W7000, NVIDIA Quadro K5000, NVIDIA Quadro K6000, NVIDIA Tesla K20c, NVIDIA Tesla K40
Audio	Creative Recon3D PCIe Audio Card, Integrated Intel/Realtek HD ALC262 Audio, optional HP Thin USB Powered Speakers
Network	Dual integrated Intel GbE LAN; Infineon TPM 1.2 Controller; Optional Broadcom GbE NIC; Optional Intel GbE NIC; Optional HP X520 10GbE Dual Port NIC; Optional Intel Ethernet I210-T1 PCIe NIC
Ports	Front: 2 USB 3.0, 1 USB 2.0, 1 IEEE 1394a standard, 1 microphone in, 1 headphone out, HP 14-in-1 Media Card Reader (optional) Rear: 2 USB 3.0, 4 USB 2.0, 1 audio in, 1 audio out, 1 microphone in, 2 PS/2, 2 RJ-45 to integrated Gigabit LAN, 1 serial via optional adapter, Rear power button with LED, 1 Thunderbolt™ 2 port via optional add-in PCIe card[3,4,16] Internal: 6 USB 2.0
Remote Technology	HP Remote Graphics Software (RGS)
Input Devices	HP PS/2 keyboard, HP USB keyboard, HP USB Smart Card Keyboard, HP PS/2 mouse, HP USB optical mouse, USB 1000dpi laser mouse, HP USB optical 3-button mouse, HP SpaceMouse Pro USB 3D, HP SpacePilot Pro USB 3D
Dimensions (H x W x D)	17.5 x 6.75 x 18.3 in (44.45 x 17.15 x 46.48 cm)
Power Supply	800 Watt 90% efficient tool-free power supply
Compatible Displays (screen size diagonally measured)	HP DreamColor LP2480zx Professional Display (24-inch diagonal widescreen), HP Z Display Z30i 30-inch IPS Display, HP Z Display Z27i 27-inch IPS Display, HP Z Display Z24i 24-inch IPS Display, HP Z Display Z23i 23-inch IPS Display, HP Z Display Z22i 21.5-inch IPS Display
Warranty[17]	Limited three-year Mon-Fri 8-5 next business day, parts, labor and 24x7 phone support, terms and conditions may vary. Extendable up to five years.

HP recommends Windows.

Screen images courtesy of Autodesk.

* This system may require upgraded and/or separately purchased hardware to take full advantage of Windows 7 functionality. Not all features are available in all editions of Windows 7. See microsoft.com/windows/windows-7/ for details.

** Not all features are available in all editions of Windows 8 and 8.1. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8 and 8.1 functionality.

*** This system is preinstalled with Windows 7 Pro software and also comes with a license and media for Windows 8.1 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.

**** Each drive requires a PCIe x4 (minimum)

1. Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 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 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations.
2. Maximum memory capacities assume Windows 64-bit operating systems or Linux. With Windows 32-bit operating systems, memory above 3 GB may not all be available due to system resource requirements.
3. Thunderbolt is new technology. Thunderbolt cable and Thunderbolt device (sold separately) must be compatible with Windows. To determine whether your device is Thunderbolt Certified for Windows, see thunderbolttechnology.net/products. Thunderbolt™ 2.0 is planned to be available via an optional add-in card in early 2014.
4. Sold as an optional or add on feature.
5. HP Remote Graphics Software requires Windows and an internet connection.
6. Support for external displays as a standard feature through integrated processor-based graphics is dependent upon the particular workstation configuration; the actual number of displays supported will vary. An optional graphics solution will be required for the support of additional displays. Additional cables required. HD (high-definition) content required to view HD images.
7. 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 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See intel.com/info/em64t for more information.
8. Intel's numbering is not a measurement of higher performance.
9. HP Z620 systems configured with E5-1600 v2 series processors may not add a 2nd processor. To support two processors, E5-2600 series processor must be chosen.
10. 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. Please visit intel.com/technology/turboboost for more information.
11. Each processor supports up to 4 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel.
12. 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. Please visit h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux
13. For hard drives and solid state drives, GB=1 billion bytes. TB= 1 trillion bytes. Actual formatted capacity is less. Up to 36 GB is reserved for system recovery software.
14. 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.
15. As Blu-ray is a new format containing 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. 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 workstation.
16. Planned availability early 2014.
17. 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.

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