HP recommends Windows® 7.

HP Z210 Workstations

Low-cost, high-performance mainstream value workstations

Do you crave workstation power on a PC budget? We have a workstation for that. Actually, we have two. The new HP Z210 Convertible Minitower (CMT) and Small Form Factor (SFF) Workstations give you workstation-class performance and reliability with faster Xeon processors, ECC memory, professional graphics, enterprise-class storage and application certification at a very appealing price point.

Meaningful innovation

The HP Z210 Workstations offer advanced workstation power and productivity at starting prices that rival traditional desktop computing systems.

- **Easy access**—Inside, with a tool-free chassis for component updates, and outside, with multiple USB ports for quick peripheral connectivity
- **Graphics choices**—New Intel® HD Graphics P3000/2000 and 2D and 3D professional graphics options from NVIDIA and AMD
- **Two compelling designs**—A traditional CMT or the 65% smaller SFF, ideal for space-constrained and cubicle environments.

Breakthrough performance

The HP Z210 Workstations offer over 20% performance improvement* over the predecessor series products.

- **Newest Intel technology**—A wide selection of enterprise class, next generation Intel® Xeon® Processor E3-1200 Family including the high performance 3.5GHz Intel® Xeon® E3-1280, or 2nd generation Intel® Core™ i3/i5/i7 processors. Selected processors also feature Intel® vPro™ technology for the first time on workstations.
- **Fine-tuned performance**—Maintain your drivers, operating systems, and applications with HP Performance Advisor
- **Compatible with practically any device**—Expanded PCIe, FireWire, and USB 2.0 or optional USB 3.0 interfaces; a range of SATA, eSATA, and storage bays; an HP Blu-ray Writer[9] and 22-in-1 media card reader
- **Energy smart**—HP's highest energy efficiency workstations so far, with 90% efficient power supplies and ENERGY STAR® v5 configurations available

Reliability where it counts

Deliver results and stay productively up and running with a confidence backed by in-depth engineering, testing, and quality assurance.

- **Enterprise-class memory technology**—Includes a choice of ECC memory configurations to help ensure data integrity and higher system uptime; lower-cost non-ECC memory options also available.
- **Close ISV relationships**—HP has invested in and developed an extensive partner ecosystem to ensure that our workstations are tested, proven and certified for the applications your work depends on- including MCAD, Architectural applications, Professional video editing and 3D animation among others.
- **Image stability**—HP Stable and Consistent options that last for the life of the platforms

*on select applications

HP Z210 Workstations

HP recommends Windows® 7.

	HP Z210 CMT	HP Z210 SFF
Form factor	Convertible minitower	Small Form Factor; convertible—may be used as desktop or tower; optional tower stand available; optional Integrated Work Center (IWC) available
Operating systems	Genuine Windows® 7 Ultimate or other editions available* HP Installer Kit for Linux (includes drivers for both 32-bit and 64-bit OS versions of Red Hat Enterprise Linux and Novell SLED 11) Novell Suse SLED 11 Linux Red Hat Enterprise Linux Desktop (paper license drop-in-the-box only)	
Available processors[1,2,3,4,5]	Intel® Pentium processor G620, 2.60 GHz, 65W, 3 MB cache, 1066 MHz memory, Dual-Core, Intel HD Graphics 2000 Intel Pentium processor G850, 2.90 GHz, 65W, 3 MB cache, 1333 MHz memory, Dual-Core, Intel HD Graphics 2000 Intel Core i3-2100 processor, 3.10 GHz, 65W, 3 MB cache, 1333 MHz memory, Dual-Core, HT, Intel HD Graphics 2000 Intel Core i3-2120 processor, 3.30 GHz, 65W, 3 MB cache, 1333 MHz memory, Dual-Core, HT, Intel HD Graphics 2000 Intel Core i3-2130 processor, 3.40 GHz, 65W, 3 MB cache, 1333 MHz memory, Dual-Core, HT, Intel HD Graphics 2000 Intel Core i5-2400 processor, 3.10 GHz, 95W, 6 MB cache, 1333 MHz memory, Quad-Core, Intel HD Graphics 2000† Intel Core i5-2500 processor, 3.30 GHz, 95W, 6 MB cache, 1333 MHz memory, Quad-Core, Intel HD Graphics 2000† Intel Core i7-2600 processor, 3.40 GHz, 95W, 8 MB cache, 1333 MHz memory, Quad-Core, HT, Intel HD Graphics 2000† Intel Xeon processor E3-1225, 3.10 GHz, 95W, 6 MB cache, 1333 MHz memory, Quad-Core, Intel HD Graphics P3000† Intel Xeon processor E3-1230, 3.20 GHz, 80W, 8 MB cache, 1333 MHz memory, Quad-Core, HT† Intel Xeon processor E3-1240, 3.30 GHz, 80W, 8 MB cache, 1333 MHz memory, Quad-Core, HT† Intel Xeon processor E3-1245, 3.30 GHz, 95W, 8 MB cache, 1333 MHz memory, Quad-Core, HT, Intel HD Graphics P3000† Intel Xeon processor E3-1270, 3.40 GHz, 80W, 8 MB cache, 1333 MHz memory, Quad-Core, HT† Intel Xeon processor E3-1280, 3.50 GHz, 95W, 8 MB cache, 1333 MHz memory, Quad-Core, HT† Intel Xeon processor E3-1290, 3.60 GHz, 95W, 8 MB cache, 1333 MHz memory, Quad-Core, HT† (HP Z210 CMT only) †Featuring Intel vPro™ Technology	
Chipset	Intel C206 chipset	
Memory[6,7]	4 DIMM slots, up to 32 GB** ECC/16 GB non-ECC, DDR3 1333 MHz (ECC/non-ECC) (ECC/non-ECC choice and actual memory speed dependent on processor capability)	4 DIMM slots, up to 16 GB ECC/non-ECC, DDR3 1333 MHz (ECC/non-ECC choice and actual memory speed dependent on processor capability)
Drive controller[8]	Integrated SATA 3 Gbps/6 Gbps controller	
Hard drive(s)[9]	Up to (3) 3.5-inch 7200 rpm SATA drives: 250, 500 GB, 1 TB, 1.5 TB; 4.5 TB max; Up to (3) 2.5-inch 10K rpm SATA drives: 160, 300 600 GB, 1.8 TB max; Up to (3) 2.5-inch SATA solid state drives: Intel X25-M 160 GB, 480 GB max	Up to (2) 3.5-inch 7200 rpm SATA drives: 250, 500 GB, 1 TB, 2.0 TB max; Up to (2) 2.5-inch 10K rpm SATA drives: 160, 300 GB, 0.6 TB max; Up to (2) 2.5-inch SATA solid state drives: Intel X25-M 160 GB, 320 GB max
Optical drives[10]	DVD-ROM, DVD+/-RW DL Super Multi, HP Blu-ray Writer, HP 22-in-1 Media Card Reader	
Drive bays	3 external 5.25-inch bays, 3 internal 3.5-inch HDD bays	1 internal 3.5-inch bay, and 1 shared with external 3.5-inch bay; 1 external 5.25-inch bay
Slots	2 PCI Express Gen2 slots x1 mechanical/x1 electrical, 1 PCI Express Gen2 slot x16 mechanical/x16 electrical (used for discrete graphics), 1 PCI Express Gen2 slot x16 mechanical/x4 electrical, 1 PCI Express Gen2 slot x8 mechanical/x4 electrical 2 PCI slots (full-height, full-length)	1 PCI Express Gen2 x16 mechanical/x16 electrical (low profile); 1 PCI Express Gen2 x16 mechanical/x4 electrical (low profile); 1 PCI Express Gen2 x1 mechanical/x1 electrical (low profile); 1 PCI slot (low profile)
Graphics (dual graphics on select cards)	Integrated Graphics: Intel HD Graphics 2000 (Intel Core-branded processors) or Intel HD Graphics P3000 (Intel Xeon E3-1xx5 processors) Professional 2D: AMD FirePro 2270, NVIDIA Quadro NVS 295, NVIDIA NVS 300—single or dual graphics cards supported Entry 3D: ATI FirePro V3800, NVIDIA Quadro 400, NVIDIA Quadro 600 Mid-range 3D: ATI FirePro V4800, ATI FirePro V5800, AMD FirePro V5900, NVIDIA Quadro 2000, NVIDIA Quadro 4000 (AMO only)	Integrated Graphics: Intel HD Graphics 2000 (Intel Core-branded processors) or Intel HD Graphics P3000 (Intel Xeon E3-1xx5 processors) Professional 2D: AMD FirePro 2270, NVIDIA Quadro NVS 295, NVIDIA NVS 300—single or dual graphics cards supported Entry 3D: ATI FirePro V3800, NVIDIA Quadro 400, NVIDIA Quadro 600
Audio	High Definition Integrated Realtek ALC262 Audio and integrated speaker; optional Creative X-Fi Titanium PCIe Audio Card; optional HP Thin USB Powered Speakers	High Definition Integrated Realtek ALC261 Audio and integrated speaker, optional HP Thin USB Powered Speakers
Network/Remote Manageability	Intel 82579 GbE Network Connection/Intel® vPro™ with AMT 7.0	
Ports	Front: 3 USB 2.0, 1 IEEE 1394a (optional; available July 2011), 1 microphone in, 1 headphone out Rear: 6 USB 2.0, 1 audio in, 1 audio out, 1 serial (optional), 1 parallel (optional); 1 microphone in, 1 DVI-I single link, 1 DisplayPort (for use with Intel HD Graphics on select processors only); dual display possible across DisplayPort and DVI-I, optional 2 rear USB 3.0 ports (PCIe card) Internal: 5 USB 2.0 ports available by two separate 2x5 and one 1x5 header	Front: 4 USB 2.0, 1 microphone in, 1 headphone out Rear: 6 USB 2.0, 1 audio in, 1 audio out, 1 standard/1 optional serial port, 1 parallel (optional); 2 PS/2, RJ-45 (NIC), 1 VGA and 1 DisplayPort (jacks are retaskable), optional 2 rear USB 3.0 ports (PCIe card) Internal: 4 USB 2.0 ports available via two 9-pin headers
Input devices	PS/2 standard keyboard, USB standard keyboard, USB smart card keyboard, PS/2 optical scroll mouse, USB 2-button optical scroll mouse, USB 3-button optical mouse, USB laser scroll mouse, USB SpaceExplorer, USB SpacePilot	
Dimensions (H x W x D)	17.6 x 7 x 17.9 in (44.76 x 17.78 x 45.43 cm)	Standard desktop orientation: 3.95 x 13.3 x 15.0 in (10.0 x 33.8 x 38.1 cm)
Power supply	400-watt 90% efficient power supply	240-watt 90% efficient power supply
Monitors (screen size diagonally measured)	HP ZR30w 30-inch S-IPS LCD Monitor, HP DreamColor LP2480zx Professional Display (24-inch diagonal widescreen), HP ZR24w 24-inch S-IPS LCD Monitor, HP ZR22w 21.5-inch S-IPS LCD Monitor	
Warranty[11]	Limited three-year Mon-Fri 8-5 next business day, parts, labor and 24x7 phone support, terms and conditions may vary. One-year warranty option available in selected countries.	

* Windows 7 systems may require upgraded and/or separately purchased hardware and/or a DVD drive to install the Windows 7 software and take full advantage of Windows 7 functionality. See http://www.microsoft.com/windows/windows-7/ for details.

** When 8 GB ECC DIMMs are available; 32 GB memory estimated availability Q4 2011.

1 Dual-Core and Quad-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 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See http://www.intel.com/info/em64t for more information.

3 Intel's numbering is not a measurement of higher performance.

4 The hyper-threading feature is designed to improve performance of multi-threaded software products; please contact your software provider to determine software compatibility. Not all customers or software applications will benefit from the use of hyperthreading. Go to http://www.intel.com/info/hyperthreading for more information, including which processors support HT Technology.

5 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. See www.intel.com/technology/turboboost for more information.

6 Each processor supports up to 2 channels of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel.

7 Intel® Xeon E3, Intel Core i3 and Intel Pentium processors can support either ECC or non-ECC memory. Intel Core i5/i7 processors only support non-ECC memory.

8 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 http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux.

9 For hard drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 8 GB of hard drive (or system disk) is reserved for the system recovery software for Windows XP and XP Pro, up to 12 GB for Windows Vista, and up to 20 GB for Windows 7.

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. Double Layer discs can store more data than single layer discs. However, double-layer discs burned with this drive may not be compatible with many existing single-layer DVD drives and players. 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.

11 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 http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at http://www.hp.com/go/carepack. Service levels and response times for HP Care Packs may vary depending on your geographic location.

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