HP recommends Windows® 7.

HP AND DOME® BY NDSsi

Leading the way in diagnostic imaging solutions

Radiologists and radiology departments gain a significant edge in performance and productivity, thanks to the combination of HP Workstations and diagnostic displays from Dome by NDSsi. You benefit from the HP commitment to performance, innovation, and reliability excellence combined with the strength of the HP and Dome relationship.

HP innovation, performance and productivity, reliability and relationships

HP Z Workstations are engineered to optimize the way hardware and software components work together, delivering massive, whole-system computational power that helps maximize your productivity and make 2D and 3D acquisition and diagnosis faster and more efficient than ever before. This gives you an edge in five key areas:

- **Innovation:** Cutting-edge technology, including a whole new range of professional 2D and 3D graphics to help create and visualize even the most complex images.
- **Performance and productivity**: Advanced compute and visualization allow you to yield faster results, great precision and ultimately provide better patient care. At the heart of HP Z Workstations are the latest Intel® Xeon® processors[1]—including Intel® QuickPath technology, advanced Intel® Turbo Boost technology[2], and Intel® Hyper-Threading[3]—to give you maximum performance and speed even when performing multiple tasks at once. You will also benefit from HP Liquid Cooling. HP is reengineering the sound of high performance, leading the workstation industry with acoustical innovations and thermal efficiencies that are designed to deliver advanced performance with a whisper-quiet and more productive workplace experience.
- **Reliability**: HP product testing includes application performance, graphics and comprehensive ISV certification for maximum productivity. You can be confident in your HP and Dome solution.
- **Relationships**: HP resources and our relationship with Dome, graphics vendors, chip suppliers and Microsoft provide a consistent application, operating system, hardware and graphics technical direction. This results in broader, more dependable medical imaging technology choices.

The HP and Dome advantage

HP has a unique relationship with Dome, working as one of its top hardware partners. This allows HP and Dome to offer a comprehensive portfolio of solutions that address the needs of our customers with innovative hardware and software that is tuned and integrated. Our close relationship and healthcare expertise help ensure solutions that perform not only today, but for the long run.

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DOME by NDSi

"Dome diagnostic display technology, running on HP Z workstations, offers leading-edge solutions for radiologists across the healthcare enterprise. This strategic partnership provides our customers with high precision viewing and fast patient data workflow, allowing radiologist to maximize their efficiency."

Dr. Peter M. Steven, Ph.D - Vice President/ General Manager, Radiology Business Unit

Right Company:
With a 20 year history of technological innovation and display excellence, Dome products by NDSsi continue to deliver the ultimate in performance and quality in imaging solutions. With multiple product lines to satisfy imaging requirements throughout the hospital enterprise, Dome is the Right Company.

Right Products:
Dome offers three different high-precision display lines for various imaging needs. The Dome GX line is a cost effective color display solution ideal for clinical environments. The Dome EX line is a complete line of color and grayscale diagnostic displays ideal for use in multiple modalities. The Dome SX line is a premium line of color and grayscale displays with our patent pending front sensor technology. The Dome RightCheck front sensor is used for remote conformance checking while our RightLight™ rear sensor ensures backlight stabilization and automatic DICOM compliance, ensuring displays are always ready for diagnostic viewing.

Right Features:
Dome displays are engineered with the latest technology and features available. Our displays have the right features that enable a radiologist to read with precision and confidence. Some of those features that make our displays unique:

- DICOM Always: Our displays are factory characterized, no field calibration is needed.
- RightLight Stabilized: enterprise-wide DICOM conformance with unmatched ease and confidence
- Precision DICOM LUTS: extra fine control of gray shades and near-perfect DICOM conformance
- ClearView Imaging: Dome displays do not have a reflective glass layer.
- Fanless design to help reduce mechanical failures

HP and DOME—Working Together

- HP submits workstations and collaborates with Dome to validate and test workstations and appropriate graphics cards. You can be confident in the quality of your HP Workstation and Dome display solution.
- Dome uses HP Workstations internally to develop and test its software.
- HP has experts who work with Dome's technical resources and are available to support customers and recommend configurations.

Right Design:
Dome displays are designed to support open architecture standards for video boards, ensuring each display presents images as fast and precise as possible. Unlike displays with proprietary video boards, Dome products have the flexibility to operate with the latest in board technology when they enter the market.

Right Service:
Dome offers a 5 year standard warranty on our EX and SX line of displays. Our company, along with our service and support is US based, allowing direct access to our:

- Customer care staff
- Application engineering group for onsite assistance
- Equipment testing labs for faster problem resolution,
- Engineering and quality groups
- Dedicated radiology experts to provide immediate recommendations and solutions

Digitalize, virtualize, maximize

"We needed workstations that were designed with performance as a driving goal. And I believe that HP Workstations deliver great performance for the money."

Andrew Willy - Information Systems Manager, Scottsdale Medical Imaging

Your digital workflow
HP Workstations can revolutionize your workflow, help you migrate your 2D and analog records to 3D and digital, and prepare you for future technology developments. HP Z Workstations are engineered to optimize the way the processor, memory, graphics, operating system, and software components work together to deliver massive, whole-system computational power that helps you maximize your IT investment and accomplish more with every minute of your time.

HP Workstation family
HP Z Workstations combine bold design, world-class engineering, energy efficiency, and robust tools to help you get the greatest return on your investment with innovation, performance, and reliability that goes beyond a typical PC.

HP Z210 CMT AND Z210 SFF WORKSTATION
The HP Z210 CMT offers advanced workstation power and productivity at a price that allows you to offer a workstation instead of traditional desktop computing systems in administrative areas, labs, and classrooms. The HP Z210 Small Form Factor (SFF) Workstation is surprisingly nimble, dynamic, and affordable. It is well suited to compact work environments such as doctor review stations. The HP Z210 Workstations offer 20% to 67% performance improvement[8] over the predecessor series products. Aggressively-priced, the HP Z210 Workstations provide a workstation class experience with cost savings.

HP Z400 Workstation
With its revolutionary architecture and bold industrial design, the HP Z400 Workstation helps you accomplish more with every dollar of your investment. The HP Z400 offers Windows® 7 and your choice of the latest dual- and quad-core[4] Intel® Xeon® processors and increased capacity for bigger challenges, with up to 24 GB[7] of faster DDR3[6] memory.

HP Z600 Workstation
The HP Z600 packs twelve-core compute and visualization power into a small, quiet package—for the ideal workstation when every inch, watt, and decibel make a difference. HP's quietest workstation, the HP Z600 is designed to fit in compact work spaces where real estate is at a premium and minimizing system noise is paramount. This workstation offers Windows® 7 and your choice of the latest six-core[4] Intel® Xeon® processors and capacity for increasingly bigger applications and data sets, with up to 48 GB[7] of high-speed DDR3[6] memory.

HP Z800 Workstation
The HP Z800 Workstation delivers ultimate performance with the extreme speed and massive expandability that you demand to handle your biggest challenges and transmit the highest-resolution 3D images. Offering your choice of the latest six-core[4] Intel® Xeon® processors, the HP Z800 can parse the largest applications and data sets with up to 192 GB[7] of high-speed DDR3[6] memory.

HP Remote Graphics Software for virtual collaboration
HP Remote Graphics Software (RGS) allows remote access and workstation sharing of 3D models, HD video[9], and media-rich applications through a standard Internet connection. For more information see www.hp.com/go/rgs.

HP Performance Advisor
HP Performance Advisor helps you maximize the performance and reliability of your workstation environment by giving you the ability to discover, optimize and manage your unique combination of hardware, graphics drivers, applications, operating system and other system resources—an exclusive HP software innovation that's included free with every HP workstation. For more information see www.hp.com/go/hpperformanceadvisor.

HP SpacePilot
SpacePilot Intelligent Controller enables two-handed operation with one hand on the mouse and one on the HP SpacePilot. This device is well suited for 3D and volumetric image manipulation:

- Refined sensing technology that allows you to intuitively push, tilt, or twist the control cap for an immediate response.
- Extendable function keys that can be programmed to simplify repeat operations; multi-layered menu pull downs enable increased efficiency.
- Comfortable design that minimizes repetitive stress.

See significant improvements in productivity with an HP SpacePilot.

HP recommends Windows® 7.

Model	HP Z210 CMT/ HP Z210SFF Workstation	HP Z400 Workstation	HP Z600 Workstation	HP Z800 Workstation	HP EliteBook 8560w & 8760w Mobile Workstation
Operating System	Genuine Windows® 7 Ultimate or other editions available	Genuine Windows® 7 Ultimate or other editions available	Genuine Windows® 7 Ultimate or other editions available	Genuine Windows® 7 Ultimate or other editions available	Genuine Windows® 7 Ultimate or other editions available
Workstation Usage	Ideal for entry level users where workstation performance is needed	Ideal for those who want to maximize performance with single-threaded applications	Ideal for those who need multi-core performance	Ideal for those who have the largest files and store large data sets	Ideal for those who need powerful processing performance and workstation graphics that won't weigh them down
PACS Applications	Ultrasound, MRI, PET-CT, CT and nuclear medicine	3-D visualization, X-ray, ultrasound, MRI, PET-CT, CT and nuclear medicine	Mammography, X-ray, 3-D Visualization, MRI, ultrasound, PET-CT, CT and nuclear medicine.	Mammography, X-ray, 3-D Visualization, MRI, ultrasound, PET-CT, CT and nuclear medicine.	3-D Visualization, X-ray, ultrasound, MRI, PET-CT, CT and nuclear medicine.
PACS configurations	Dual display with worklist	Dual display with worklist Dual display with 3D worklist Quad display with worklist	Dual display with worklist Dual display with 3D worklist Quad display with worklist	Dual display with worklist Dual display with 3D worklist Quad display with worklist Quad display with 3D worklist* *Requires 1110W power supply.	Single EliteBook display Dual display with worklist* *HP 230W Adv Docking Station US (NZ223UT#ABA) required.
Supported WorkList Displays	HP ZR22W, ZR24W Dome GX2MP, E2cHB	HP ZR22W, ZR24W Dome GX2MP, E2cHB	HP ZR22W, ZR24W Dome GX2MP, E2cHB	HP ZR22W, ZR24W Dome GX2MP, E2cHB	HP ZR22W, ZR24W Dome GX2MP, E2cHB
Supported Diagnostic Displays	Dome E2cHB, E3*, E3cHB, S3c, E4c**, E5* *Not offered in dual display configuration on HP Z210 SFF. **Not offered in dual display configuration.	Dome E2cHB, E3, E3cHB, S3c, E4c*, E5, S10** *Not offered in dual and quad display configurations. **Not offered in quad display configuration.	Dome E2cHB, E3, E3cHB, S3c, E4c*, E5, S10** *Not offered in dual and quad display configurations. **Not offered in quad display configuration.	Dome E2cHB, E3, E3cHB, S3c, E4c*, E5, S10** *Not offered in dual and quad display configurations. **Not offered in quad display configuration.	HP EliteBook DreamColor* Dome E2cHB, E3, E3cHB, S3c, E5, S10* *Not offered in dual display configurations.
Graphics Cards	Worklist: Intel® HD Graphics (with dual-core processors only) HD Graphics P3000 (with Xeon Processors only), NVIDIA NVS 300† Diagnostic: NVIDIA Quadro 600, NVIDIA Quadro 2000† † Not available on HP Z210 SFF	Worklist: NVIDIA Quadro NVS 295, NVIDIA NVS 300 3D Worklist: NVIDIA Quadro 2000, NVIDIA Quadro 4000 Diagnostic: NVIDIA Quadro 2000	Worklist: NVIDIA Quadro NVS 295, NVIDIA NVS 300 3D Worklist: NVIDIA Quadro 2000, NVIDIA Quadro 4000 Diagnostic: NVIDIA Quadro 2000	Worklist: NVIDIA Quadro NVS 295, NVIDIA NVS 300 3D Worklist: NVIDIA Quadro 2000, NVIDIA Quadro 4000 Diagnostic: NVIDIA Quadro 2000	Worklist: HP Promo USB Graphics Adapter (NL571AT) Diagnostic & 3D: NVIDIA Quadro 2000M graphics with 2 GB dedicated DDR3 video memory NVIDIA Quadro–4000M graphics with 2 GB dedicated DDR5 video memory
Processors[1,4,5]	• Intel Core™ i3 processor • Quad-core Intel® Core™ i5 or i7** • Quad-core Intel® Xeon® Processors** ** Featuring Intel® vPro Technology	• Dual-, quad-, and six-core Intel® Xeon® processor 3500 and 3600 series • Intel® QuickPath Technology	• Quad- and six-core Intel® Xeon® processor 5500 and 5600 series • Intel® QuickPath Technology	• Quad- and six-core Intel® Xeon® processor 5500 and 5600 series • Intel® QuickPath Technology	• Quad- and six-core Intel® Xeon® processor 5500 and 5600 series • Intel® QuickPath Technology

For more information about HP Workstation solutions, **please visit www.hp.com/go/wshealthcare**

* 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.

1. 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 www.intel.com/info/em64t for more information.
2. 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.
3. Intel HT Technology (HT) is designed to improve performance of multi-threaded software products and requires a computer system with a processor supporting HT and an HT-enabled chipset, BIOS, and operating system. Please contact your software provider to determine compatibility. Not all customers or software applications will benefit from the use of HT. See http://www.intel.com/info/hyperthreading for more information.
4. Six-core, quad-core, and dual-core 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; check with software provider to determine suitability; Not all customers or software applications will necessarily benefit from use of these technologies.
5. Intel's numbering is not a measurement of higher performance.
6. Each processor supports up to 2 channels (HP Z210/HP Z210 SFF) or 3 channels (HP Z400/HP Z600/HP Z800) of DDR3 memory. To realize full performance at least 1 DIMM must be inserted into each channel. To get full 6 channel support, 2 processors MUST be installed.
7. For hard drives, 1 GB = 1 billion bytes. 1 TB = 1 trillion bytes. Actual formatted capacity is less. Up to 20 GB of hard drive (or system disk) is reserved for the system recovery software for Windows 7.
8. Based on benchmark testing done at HP's Workstation Technical Consulting Labs, with workstation market applications including the SPECapc benchmarks for Pro/ENGINEER Wildfire 2.0, SolidWorks 2007, 3ds Max V9, Maya 2009 and LightWave as well as the Cadalyst C2010 v5.3 Benchmark Test and SunGard 4, comparing an HP Z200 Workstation with an Intel® CoreTM i5-680/Intel® Xeon® X3480 processor to an HP Z210 Workstation with an Intel Core i7-2600/Intel Xeon E3-1280 processor. All other system configurations were selected to be as equal as possible. Not all applications may experience similar performance improvements.
9. HD Content required to view HD images.

4AA3-8019ENW, November 2011

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