Better. Faster. Stronger. The Workstation Superhero

It’s here. A workstation that delivers the multi-core processing punch you’ve been waiting for—with levels of performance you’ve only dreamed about. Developed in close collaboration with hardware and software partners, the next-generation Dell Precision 690 workstation lets you create, design, render, and analyze, without compromise. Designed to deliver groundbreaking performance, blistering speed and scalability for compute and graphics intensive environments, the Dell Precision 690 helps you power through complex tasks and complete projects faster than its predecessor.

• New 64-bit quad-core Intel Xeon processors can deliver big performance gains over the current dual-core processors when running multiple single-threaded applications simultaneously (multi-tasking) and for individual applications which can take advantage of up to eight cores (multi-threaded).¹

• Up to 5x more memory bandwidth over dual-channel memory with quad channel² memory architecture³

• Memory scalability up to 64GB⁴ with DDR2 fully buffered ECC DIMMs

• Dual graphics capabilities that support quad monitors or NVIDIA® SLI™ technology for enhanced graphics performance available via an optional graphics riser card in a specially designed 1KW chassis

• Cutting edge SAS (Serial-attached SCSI) hard disk storage delivers up to 50% higher performance than SATA 10K drives⁵

• Innovative chassis designed for increased security, ease of access and exceptional expandability with support for up to five hard disk drives

Amazing Dual Graphics Performance

Dell understands that exceptional graphics performance and high-end visualization capabilities are a requirement for some complex applications. The Dell Precision 690 offers an optional dual graphics solution that enables quad monitor support to view separate images across four monitor screens or stretch a single image across all four screens; or delivers NVIDIA’s SLI technology. This allows you to connect two high-end graphics cards which will work together for 3D graphics performance that’s as exceptional as your ideas.

New Heights of Scalability

With additional DIMM slots to expand memory capacity up to 64GB⁴, and a chassis designed for expandability, the Dell Precision 690 provides a highly scalable architecture that enables you to manage massive datasets with outstanding performance and reliability. Imagine having the freedom to work the way you’ve always wanted. Now you can. If you’re ready to optimize efficiency and power usage with a platform that will scale to higher performing, low wattage multi-core processors available today and into the future, the Dell Precision 690 is the ultimate choice. And with Independent Software Vendor (ISV) application certification, you can be sure your applications will run efficiently on Dell Precision workstations, today and tomorrow.

Peace of Mind Through ISV Application Certification

Dell partners with leading ISVs to certify system and application compatibility to ensure optimized performance in demanding workstation environments. And, to assure access to the latest productivity enhancing technology solutions, Dell invests in the workstation ISV community by providing the hardware platforms needed to further multi-threaded and 64-bit application development. By maintaining strong relationships with ISV application developers, Dell engineers can provide ongoing optimization and support, should you need it.
Dell Precision™ 690 Workstation

SYSTEM

Processors
Dual-core Intel® Xeon® 5100 series processors with up to 1333MHz front side bus and 4MB shared cache; Quad-core Intel Xeon 5300 series processors with up to 1333MHz front side bus and 2x 4MB shared cache; All processors are 64-bit, XD and VT capable

Operating Systems
Genuine Windows® XP Pro SP2

Graphics
BIOS 8MB flash memory for system BIOS, SMBIOS 2.3.4 support

Chipset
Intel® 5000X chipset

Memory
Up to 64GB quad-channel architecture DDR2 Fully Buffered DIMM 533 and 667MHz ECC memory; Up to 16 DIMM slots; 1KW chassis required for memory expansion greater than 32GB (with 8 DIMM slots)

Flash BIOS
BIOS 8MB flash memory for system BIOS, SMBIOS 2.3.4 support

Hard Drives
SATA 3.0Gb/s 7200 RPM with 16MB Data Burst Cache up to 750 GB; SATA 3.0Gb/s 7200RPM with 8MB Data Burst Cache™ up to 250GB; SATA 10K RPM with 16MB Data Burst Cache up to 160GB; SAS 10K RPM up to 300GB; SAS 15K RPM up to 146GB; Chassis supports up to five internal drives in a SATA boot plus four SAS drive configuration (2.5" 1TB maximum storage capacity)

Network Controller
Integrated Broadcom® 5725 Gigabit Ethernet controller

Audio Controller
Integrated High Definition Audio (Rev 1.0 Specification) with SGSMTel STAC9200 High Definition Audio CODEC and Intel ESB2’s AC97/ High Definition digital controller

Standard I/O Ports
Eight USB 2.0: two on front panel, five on back panel, one internal on motherboard; Two IEEE 1394a: one front, one rear; Two serial; One parallel; Two PS/2; One RJ-45; Stereo line-in and headphone line-out on back panel; Microphone and headphone connector on front panel

CHASSIS

Dimensions
(WxHxD) 8.5” x 22.6” x 22.3”, 21.59cm x 56.54cm x 56.6cm without stand, includes feet; 12.8” x 22.6” x 22.3”, 32.5cm x 56.54cm x 56.6cm with stand and feet

Tower
Four internal 3.5” hard disk drive bays; Three external 5.25” optical bays, one of which can accommodate a fifth HDD; One external 3.5” flex bay for floppy or media card reader; Slots: Three PCI-e x8 slot wired as x4; One PCI-e x16 graphics slot; Two PCI-e x16 slots with optional graphics card riser on 690 1KW chassis (must be ordered at system purchase); Two PCI-X 64bit/100MHz slots with support for 3.4 or universal cards, One PCI 32bit/33MHz slot; 750 or 1000 watt Power Factor Correcting (PFC) power supply

PERIPHERALS

Optional Removable Storage
CD-ROM, CD-RW, CD-RW/DVD Combo, DVD-ROM, DVD+/-RW, USB Floppy Drive, USB media card reader

Optional Modem
Dell 56K v.92 Data/Fax PCI modem

STORAGE DEVICES

Optional Speakers
cards support dual monitor configurations; SLI (Scalable Link Interface) and Quad Monitor options available via optional dual graphics riser card on 1KW chassis at the time of system purchase. SLI and Quad Monitor configurations available with select graphics cards.

PERIPHERALS

Software
Dell QuickSet, Power Manager, Dell Diagnostics

Hardware
Kensington Lock, Padlock

ENVIRONMENTAL & REGULATORY

Standards
TC098, Blue Angel, Green PC, Energy Star, BSMI, C-Tick, CE, FCC, IRAM, NEMKO, NPFA 99, SABS, SASO, TCO, TUV, UL, VCCI, USB 2.0, WEEE

SERVICE & SUPPORT

Base
3-Year Limited Warranty with 3 years standard Next Business Day (NBD) on-site parts replacement and 3 years NBD onsite labor (US Only)

Recommended
3-Year Same Business Day 4 hour On-site Service – 5 days a week, M-F 10 hours a day (8-6PM)

3-Year Same Business Day 4 hour On-site Service – 7 days a week, 24 hours a day

3 & 4-year Gold Technical Support, expert support via phone, e-mail and online chat - 7 days a week, 24 hours a day

NOTE: Some applications and peripherals are not compatible with a 64-bit operating system environment. To be sure with all of your current application vendors that your full application suite is compatible before purchasing a Dell Precision workstation with a 64-bit operating system.

Dell PCs use genuine Microsoft Windows. www.microsoft.com/piracy/howtointel. Dell’s Terms and Conditions of Sales and Service apply and are available upon request. Dell cannot be held responsible for errors in typography or photography.

1. Quad-core performance gains over dual-core based on the SPEC CPU2000 rate 8p int and f benchmark tests performed by Dell Labs in October 2006 on the Dell Precision 690 with two Intel Xeon 5300 quad-core processors with 2 x 4MB shared L2 cache and 1066MHz FSB, 4GB DDR2 533 ECC FBD memory, NVIDIA Quadro® FX3500 graphics, 80GB SATA 7200RPM HDD, Microsoft Windows XP Pro SP2 as compared to the Dell Precision 690 with two Intel Xeon 5000 and 5100 sequence dual-processors with 4MB L2 cache and 1066MHz FSB, 4GB DDR2 533 ECC FBD memory, NVIDIA Quadro® FX3500, ATI FireGL 7200, NVIDIA Quadro® FX 3450, NVIDIA Quadro® FX5500, ATI™ FireGL™ V3400; NVIDIA Quadro® NVS 285; All graphics cards support dual monitor configurations; SLI (Scalable Link Interface) and Quad Monitor options available via optional dual graphics riser card available in the 1KW chassis at the time of system purchase. SLI and Quad Monitor configurations available with select graphics cards.

2. Intel® 5000X chipset

3. Intel® 5000X chipset

4. Up to 64GB quad-channel architecture DDR2 Fully Buffered DIMM 533 and 667MHz ECC memory; Up to 16 DIMM slots; 1KW chassis required for memory expansion greater than 32GB (with 8 DIMM slots)

5. 1KW chassis required for memory expansion greater than 32GB (with 8 DIMM slots)

6. Based on currently available information from Microsoft. Requirements subject to change. Windows Vista has not been tested on all user configurations. And may not be compatible with some hardware devices and other software. Dell systems must be configured with a minimum of 512MB system memory (RAM) for “Windows Vista Capable” designation. Systems which meet only minimum requirements for the “Windows Vista Capable” designation will not provide the full benefits of “Premium Ready,” including the Aero interface. Some Dell systems may not meet the requirements for “Premium Ready,” no matter the configuration. Aero and other premium features not available with Windows Vista Home Basic.

7. For hard drives, one GB means 1 billion bytes and one TB equals one trillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

8. This term does not con note an actual operating speed of 1 GB/sec. For high speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required. DVD-ROM drives may have write-capable hardware that has been disabled via firmware modifications. 10 Discs burned with this drive may not be compatible with some existing drives and players; using DVD-R+W drives provides maximum compatibility. 12 Download speeds are limited to 56Kbps. Upgraded speeds are less (about 38Kbps). Speeds can vary by line condition and modem manufacturer: Analog phone line and service required. 13 Meets the requirements of the EU Directive on the Restriction of the use of certain Hazardous Substances dated January 27, 2003. For the EU Directive on the Restriction of the use of certain Hazardous Substances directive, this system (chassis and factory installed components) or configuration contains less than 0.1% lead by weight.

9. 3-Year Same Business Day 4 hour On-site Service – 7 days a week, 24 hours a day

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11. 3 & 4-year Gold Technical Support, expert support via phone, e-mail and online chat - 7 days a week, 24 hours a day

12. For a complete copy of our guarantees and limited warranties, please write Dell U.S.A. L.P., Attention: Warranties, One Dell Way, Round Rock, TX 78682. For more information, visit www.dell.com/warranty. 16 Service may be provided by third-party. Technician will be dispatched if necessary following phone-based troubleshooting. Subject to parts availability, geographical restrictions and terms of service contract.

13. 3-Year Limited Warranty with 3 years standard Next Business Day (NBD) on-site parts replacement and 3 years NBD onsite labor (US Only)

14. 3-Year Same Business Day 4 hour On-site Service – 5 days a week, M-F 10 hours a day (8-6PM)

15. 3-Year Same Business Day 4 hour On-site Service – 7 days a week, 24 hours a day

16. Service may be provided by third-party. Technician will be dispatched if necessary following phone-based troubleshooting. Subject to parts availability, geographical restrictions and terms of service contract. Service timing dependent upon time of day call placed to Dell. U.S. only.

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