The Dell Precision Workstation 650 is a highly-scalable dual-processing solution designed for complex computing environments that require outstanding performance, expandability and capacity.

**Highly Scalable Performance**

The Dell Precision Workstation 650 combines Dell’s latest technology advancements with the Intel® Xeon™ dual processor architecture designed to deliver maximum scalability and performance for your most demanding applications. With a 533MHz Front Side Bus, a 512K cache (3.06GHz and 3.20GHz processors with 1MB Level 3 cache available) and the workstation-optimized Intel E7505 chipset, the Xeon architecture provides speeds up to 3.06GHz and aggressive performance. The Precision 650 also incorporates the newest dual channel memory technology offering up to 4GB of PC2100 Double Data Rate SDRAM memory at 266MHz. It is perfectly matched to the 4.2GBs bandwidth of the 533MHz FSB giving you optimum memory capabilities.

The Precision 650 offers a wide range of integrated high performance I/O options to help keep data flowing quickly and smoothly through your organization. The AGP 8X Pro110 option offers exceptional graphics capabilities with 2GB/s of bandwidth between high performance graphics cards, both processors and the high-speed memory. Additionally, two integrated 64-bit 100MHz PCI buses support a wide range of performance option cards PLUS integrated 64-bit Gigabit Ethernet (8X faster than 10/100 Ethernet), integrated 64-bit U320 SCSI with performance-enhancing RAID 0, and USB 2.0.

With advanced 64-bit Gigabit networking technology, the Dell Precision 650 facilitates all of your collaboration efforts, from creating complex CAD documents to editing and composing a video documentary.

**Workstation-Class Graphics and Audio**

The Dell Precision 650 offers the latest generation of high performance workstation-class graphics cards, all of which support dual monitor configurations. The new 128MB nVidia QuadroFX 1000 provides exceptional OpenGL 3D performance with outstanding new features. For additional specialized features the 3Dlabs 256MB Wildcat 7110 card is also offered. The ATi Fire GL X1 mid-range card delivers an excellent price/performance solution for the demanding 3D user, while the new 128MB nVidia QuadroFX 500 delivers quality 3D performance at an entry level price. Rounding out the Dell Precision 650 graphics offerings, nVidia’s 84MB Quadro NVS 280 is available for customers who desire a low cost card that provides great 2D performance with optional dual monitor capability.

**ISV Application Certification**

Dell partners with leading workstation Independent Software Vendors (ISVs) to certify system and application compatibility so your applications will run powerfully and efficiently on the Dell Precision 650. Through rigorous testing, Dell helps ensure flawless compatibility in demanding workstation environments. We tune Dell Precision hardware for optimized performance with each application. Plus, Dell provides specialized ISV service support to keep your system running smoothly with your applications.

Dell Precision’s ISV partners include: ADOBE - Premiere; Alias - Maya; ANSYS - Multiphysics, DesignSpace; AutoDesk - AutoCAD, Inventor, Discreet - 3ds Max, AVID - Softimage XSI, Softimage 3D; Bentley Systems - Microstation; Dassault Systems - Catia V5, Enovia DMU, SolidWorks; EDIS - Unigraphics, Solid Edge; ESRI - Arc/INFO, Arc/View; FLUENT; MSC Software - Nastran, Patran; Newtek - Lightwave; PTC - Pro/Engineer; Wildfire; and Mechanica.

**Scaling Your Dell Precision 650 Solution**

The Dell Precision 650 is highly scalable, so you can configure a system that matches your unique requirements both today and into tomorrow. With a full range of performance options, such as high performance PCI and PCIx cards that include the latest U320 SCSI RAID controller and multiple, certified graphics choices, the Precision 650 is built with your future needs in mind.

The Dell Precision 650 supports up to four hard drives capable of providing a maximum of 240GB of combined IDE or 584GB of combined SCSI capacity. An 8MB DataBurst cache included on the 120GB IDE hard drive provides exceptional performance in a desktop storage technology, while the high-speed, 15,000 RPM U320 SCSI drives provide maximum performance and capacity for compute-intensive workstation applications. And for external storage requirements, the Dell Precision 650 is capable of supporting up to three external devices. Select from Dell Precision’s wide range of 5.25” external devices including the versatile DVD + RW drive and CD-RW/DVD-ROM combo drive as well as CD-RW, CD-ROM, DVD-ROM and Zip 250 devices.

**Rich and Reliable Manageability Features**

Dell follows open industry standards for system management and network administration to help ensure your system integrates seamlessly with your network. The Dell OpenManage™ suite of products delivers software and hardware management features designed to help lower total cost of ownership. It also helps keep you productive and current by enabling mass system updates, providing system alerts and allowing after hours software updates and imaging. In addition, you receive the benefits of Dell’s award-winning service and support with a dedicated workstation phone queue and three year Next Business Day On-Site service.

Providing uncompromised performance, exceptional scalability and flexibility and the latest dual-processor technology, the Dell Precision 650 is well suited for the most challenging workstation applications.
Dell Precision Workstation 650

**SYSTEM**

- **Processor**: Up to two Intel® Xeon™ processors with 533MHz front side bus and 512KB L2 cache (Optional 3.06GHz and 3.20GHz with 1MB L3 Cache)
- **Operating Systems**: Microsoft Windows® XP Professional; Microsoft Windows 2000 Professional; Red Hat Linux
- **Chipset**: Intel E7505 chipset
- **Memory**: 256MB non-EE 266 MHz DDR memory standard; 4 DIMM slots - 4GB ECC or non-ECC standard: 128MB, 256MB, 512MB, or 1 GB DIMM, low latency unbuffered memory
- **Flash BIOS**: AMB Flash memory for system BIOS, setup, Plug-and-Play DMA 2.0s (optional) and SMBIOS 2.3.1 support
- **Graphics Support**: nVidia Quadro FX 500 , AGP 8X, 128MB Dual Monitor (VGA or DVI) or ATI FireGL X1, AGP 8X, 128MB Dual Monitor (VGA or DVI)
- **Hard Drives**: 7,200RPM: 20GB, 40GB, 80GB
- **Hard Drive Controller**: Integrated channel/connector, bus mastering ATA/100
- **Network Controller**: Integrated PClx 64-bit Intel 10/100/1000 Gigabit Ethernet
- **Audio Controller**: Integrated Analog Devices AC’97 Audio
- **Standard Rear I/O Ports**: USB 2.0 (4), 1394a, serial (2), parallel, PS/2 keyboard, PS/2 mouse, RJ-45 ethernet, stereo line-in, microphone-in, and speakers/Sline-out
- **Standard Front I/O Ports**: USB 2.0 (2), 1394a, headphone, and microphone-in, 1.44MB FDD
- **Optional I/O**: PCMCIA Card Reader

**CHASSIS**

- **Mini Tower Chassis**: (19.87” H x 8.89” W x 19.8” D): Three internal 3.5” x 1” HDD drive bays (fourth HDD supported in 5.25” bay), three external 5.25” drive bays, one external floppy drive bay, one AGP 8X Pci110 slot, three PCI slots (3.3v, 64b/100MHz), two PCI 2.2 slots (64b/33MHz), 460 Watt Power Factor Correcting (PFC) power supply

**PERIPHERALS**

- **Monitors**: Dell E772 17” (16” viewable) Monitor
- **Optional Removable Storage**: Dell 3.5” Internal Ultra ATA 44MB Cache 5400RPM 64MB Data Burst Cache: 120GB
- **Keyboard (105 Keys)**: Dell PS/2 Entry Quiet Key; Dell USB Hot Key Programmable Keyboard; Dell Smart Card Reader Keyboard
- **Mouse**: Dell PS/2 2 button mouse; Microsoft® IntelliMouse® PS/2 2 button scroll mouse; Logitech USB Optical 2 button scroll mouse
- **Speakers**: Optional Internal Dell business audio speaker
- **Modem**: 56K PCI or x2 internal controller-less Data/Fax modem
- **Network Adapter**: Microsoft Office XP SP 2; Microsoft Office XP SP 3; Microsoft Office XP SP 4
- **Standard Management Tools**: Dell OpenManage™ IT Assistant, LegacySelect (control of I/O ports), OpenManage Client Instrumentation
- **Standard Manageability Features**: Desktop Management Interface (DMI) 2.0S, CIM, WBEM, Windows Management (WMI) 2.0, PXE, DNS, SNMP, SMB BIOS 2.3.1, Advanced Control, Power Interface 1.0b (ACPI), DDC2b and Diagnostic LEDs: Four yellow and/or green LEDs on front of system
- **Key Support Features**: 3/4 sleep state support, Remote System Alerts, Remote BIOS Flash, Remote BIOS configuration, Remote Wake-up capability, DAM information export to SMS, DIMM Pre-Failure Alert, Asset Tag, Property Ownership Tag, Chassis Intrusion Alert, DAM Configuration Change Alert, Enhanced S.M.A.R.T. II HDD Alerts
- **Base**: TC099, Blue Angel, Energy Star BMU, C-TICK, CE, FCC, IRAM, NEMKO, NFPA 99, SABS, SASO, TUV, UL, VCCI

**STORAGE DEVICES**

- **5 Year limited warranty** and Next Business Day on-site service (US Only)
- **Optional**: 3 Year Same day 4-hour Response Service; 7 days a week a day

Dell’s Terms and Conditions of Sale and Service apply and are available upon request. Dell cannot be held responsible for errors in typographic or photographic content.