Silicon Graphics Zx10™ VE Visual Workstation

The Silicon Graphics Zx10 VE visual workstation is a deskside or rack-mount workstation featuring Wahoo Technology™, which delivers unparalleled system throughput and I/O bandwidth using industry-standard components. Powered by the latest single or dual Intel® Pentium® III processors, the system is equipped with a robust 450 W power supply and supports an unprecedented 365GB of internal storage. Designed to support the latest Wildcat™ 4210 3D graphics from 3Dlabs, Silicon Graphics Zx10 VE offers the highest performance available in an Intel architecture–based workstation today. It delivers unparalleled graphics performance, system bandwidth, and internal storage for demanding technical and creative applications such as virtual sets, real-time motion capture, visual simulation, mechanical CAD, and 3D animation for film and broadcast.

Features	Benefits
SGI™ Wahoo Technology with Streaming Multiport Architecture™	The system architecture is engineered to provide the highest possible graphics performance and memory bandwidth using industry-standard components. It provides up to 5GB-per-second system bandwidth and fully utilizes processors, graphics, memory, and I/O subsystems. This results in faster throughput, fewer delays, and greater productivity.
Industry-leading graphics subsystems: 3Dlabs Wildcat 4210, Wildcat 5110, or Matrox Millennium G450	Customers can select the best graphics option for their applications. 3Dlabs Wildcat 4210 and 5110 graphics cards combine a rich feature set designed for high-end professional 3D graphics workflows with the highest levels of real-time on-screen performance for an Intel architecture. The cards feature support for dual displays and large dedicated frame buffers and texture memory. Matrox Millennium G450 offers fast acceleration for 2D and entry-level 3D users, 32MB DDR frame buffer memory, and a Dual Head display option.
Single or dual Intel Pentium III processor featuring fast on-die 256KB Level 2 Advanced Transfer Cache	Providing superior computing performance, the Pentium III processor's scalable design and flexible architecture allow the customer to add exactly the amount of processing power needed.
High-bandwidth 64-bit PCI slots	The high-bandwidth PCI provides a flexible expansion platform to accommodate high-bandwidth I/O devices.
High-performance memory subsystem featuring Fast/Wide memory bus and up to 6GB of memory capacity	The memory bus features a staggering bandwidth of 2.1GB per second. As a result, the processors can stream data while simultaneously satisfying the demands of peripheral devices such as hard disk and I/O devices. This allows users to work with large data sets and the most memory-intensive visual computing applications.
Windows NT® 4.0 and Windows® 2000 Professional	The system is ready to power on with Windows professionally installed and tested for system compliance.
Comprehensive one-stop support for both hardware and software	Leverages SGI's enterprise experience in global services and offers 90-day software and three-year hardware support, including first-year on-site warranty service for Windows NT 4.0 and Windows 2000.

Silicon Graphics Zx10 VE Visual Workstation
Technical Specifications

Operating System
· Windows 2000 Professional or Windows NT Workstation 4.0

Chassis Style
· Rack-mount or tower ATX form factor

Processor
· Intel Pentium III processor; 1 GHz, 933 MHz, or 866 MHz, dual; 32KB Level 1 cache, 256KB Advanced Transfer Cache

Memory
· 256MB–6GB*; 133 MHz ECC SDRAM DIMM, three banks, two DIMMs per bank; 128 bits wide; industry-standard 168-pin, synchronous

System I/O
· 266 MHz high-speed interconnect between chipset and PCI bus; two peer PCI buses, aggregate I/O bandwidth 800MB/sec

Graphics
3Dlabs Wildcat 5110
· Highest level of real-time, on-screen performance in the industry; complete OpenGL® 1.2 geometry acceleration using two highly tuned hardware geometry engines; dedicated 64MB frame buffer and 64MB texture memory for rich, photo-realistic shading and highly detailed textures, always in true color, with maximum depth accuracy and with double buffering enabled; wide, independent buses connect frame buffer and texture memory to the graphics chipset for maximum performance; specialized DirectBurst technology optimizes the 3D graphics pipeline, significantly boosting performance; SuperScene™ anti-aliasing dramatically improves the sense of reality with true, multisampled scene mode anti-aliasing; hardware-accelerated 3D volumetric texture provides real-time performance with 3D textures; fully programmable geometry processors provide access to the latest innovations in graphics APIs by means of a simple software driver update, thus protecting the graphics investment and providing more power on the desktop; stereo sync support; dual-screen support (Windows 2000)

3Dlabs Wildcat 4210
· Ultrahigh level of real-time on-screen performance; highly tuned 6,400 MFLOPS geometry pipeline; 128MB frame buffer; 128MB texture memory (true color, maximum depth accuracy, double buffering enabled); wide, independent buses connect frame buffer and texture memory to the graphics chipset for maximum performance; SuperScene anti-aliasing (true, multisampled scene mode anti-aliasing offering higher performance and significantly lower memory utilization than typical multisampled anti-aliasing techniques); multiview functionality allows frame locking and rate locking of multiple workstations; Genlock support; 3D volumetric texture support; specialized DirectBurst technology optimizes the 3D graphics pipeline, significantly boosting performance; advanced 2D and 3D rendering functionality guarantees maximum acceleration of the most advanced professional 3D applications; dual-screen support (Windows 2000)

Matrox Millennium G450
· Matrox Millennium G450 offers fast acceleration for 2D and entry-level 3D users; 256-bit DualBus graphics chip; supports OpenGL and DirectX applications; 32MB DDR frame buffer memory; Dual Head display; VCQ rendering that eliminates color banding in richly colored single and multitextured polygons; RAMDAC (360 MHz for primary display [up to 2048x1536 at 32 bpp]—230 MHz for secondary display [up to 1600x1200 at 32 bpp])

Display Monitors (Optional)
· 19" color monitor
· 21" color monitor
· 24" color monitor
· Silicon Graphics® 1600SW flat panel display

Disk Storage Subsystem
Disk Interface Technology
· Integrated dual-channel Ultra3 SCSI; one channel standard for internal drive support; second channel supports external standard; two Mode 4–enhanced EIDE channels
Disk Devices
· SCSI 10,000 RPM: U160/m 18.2GB, 36.4GB, and 73GB
Drive Bays
· Tower: seven bays total; three 1" internal or two 1.6" internal bays for disk drives; two 5.25" by 1.6" full-length externally accessible bays for disk drives (two 1" or one 1.6" and one 1") or data-storage devices; one external bay for floppy drive; one bay for CD-ROM
· Rack-mount: eight bays total; four 1.6" and one 1" internal bays for disk drives; one 5.25" by 1.6" full-length externally accessible bay for a data-storage device or disk drive; one external bay for floppy drive; one bay for CD-ROM
Maximum Internal Storage Capacity
· Tower: 365GB; supports four 1"-high and one 1.6"-high drives or one 1"-high and three 1.6"-high drives
· Rack-mount: 438GB; supports five 1.6"-high drives and one 1"-high drive

Card Expansion Slots
· Seven full-length slots: one AGP Pro 110, six 64-bit PCI (two 66 MHz; four 33 MHz)

CD-ROM
· 52X ATAPI preinstalled

Floppy Disk Drive
· 3.5" diskette, 1.44MB preinstalled

Audio
· Integrated Ensoniq ES1373 AudioPCI sound controller

Power Supply
· 450 W; provides +3.3 VDC, +5 VDC, +12 VDC, and -12 VDC to system components; accepts 90–264 VAC at 47–63 Hz

Network Adapter
· Intel 82559 Fast Ethernet integrated controller; 10/100Base-TX Ethernet with single, RJ-45 connection; wake-on-LAN

External Ports
· Two six-pin mini-DIN ports, one each for PS/2-style keyboard and mouse; two USB ports (12MB/sec); two nine-pin 16550-compatible DB9 serial ports; one 25-pin Centronics-compatible DB25 parallel port, supports EPP and ECP standards; one 68-pin Ultra3 high-density SCSI port

System Management Tools
Hardware Monitor
· Temperature sensing and reporting; CPU and power plane voltage sensing and reporting; SMART drive status reporting; memory error reporting
DMI
· Compliant with DMI 2.0 specification from DMTF; produces files in PC Systems-Standard MIF 1.3 format suitable for use with DMI-compliant applications
SMART Drive
· SMART drive health monitoring and impending failure reporting

Physical Specifications
Tower
· Dimensions (HxWxD): 53.3 x 19.3 x 52.1 cm (21 x 7.6 x 20.5")
· Weight: 25 kg (55 lb) max. configuration
Rack-Mount
· Dimensions: (5U) 22.2 H x 43.2 W x 67.3 D cm (8.75" H x 17.0" W x 26.5" D—depth dimension includes 3.8 cm [1.5"] for handles)
· Weight: 35.5 kg (78 lb) max. configuration

Environmental Requirements (Operating)
Temperature
· Optimum: 21°C (70°F)
· Recommended: 10° to 32°C (50° to 90°F)
Relative Humidity
· Optimum: 50% noncondensing
· Recommended: 20% to 80% noncondensing

Regulatory Approvals (Meets or Exceeds)
· Safety: UL/ULc 1950—3rd Addition, EN60 950: A1, A2, A3, A4 (harmonized IEC 950), Low-Voltage Directive 73/23/EEC (CE)
· EMC: EN55024/EN61000-3-2, -3-3, -4-2, -4-3, -4-4, -4-5 (CE)
· RFI/EMI: FCC Class B, CISPR 22 Class B (EN55022)

Acoustics
· Declared per ISO9296, measured according to ISO7779

Tower Sound Mode	Pressure	Power
Idle	~37 dBA	5.0 Bels
Operating	~45.3 dBA	5.6 Bels

Rack-Mount Sound Mode	Pressure	Power
Idle	~41.4 dBA	5.1 Bels
Operating	~50.6 dBA	5.8 Bels

· Meets Environment Category 3, Quiet Office, Desktop/Deskside per Swedish Statskontoret 26:2, 1988

*6GB max. system memory requires 1GB DIMMs, which are not currently available through SGI.

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