Datasheet

Silicon Graphics Zx10™ Visual Workstation

The Silicon Graphics Zx10 visual workstation is a deskside workstation featuring Wahoo Technology™, which delivers unparalleled system throughput and I/O bandwidth in an industry-standard architecture. It combines Wahoo Technology, system-level acceleration for the graphics pipeline, a 133 MHz front-side bus, and Intel® Pentium® III processors. The result is an optimized architecture designed to run power-hungry visual computing applications at lightning speeds. Silicon Graphics Zx10 delivers unparalleled graphics performance, system bandwidth, and internal storage for demanding technical and creative applications such as virtual sets, real-time motion capture, 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.
High-performance graphics subsystems: 3Dlabs Wildcat™ 5110 and 4110 VIO, VPro VR7, or Matrox Millennium G450	Customers can select the best graphics option for their application. The 3Dlabs Wildcat boards feature a 64MB frame buffer, a 64MB texture memory, and a rich feature set designed for high-end professional 3D graphics workflows. The VPro VR7 64MB DDR graphics board is a robust and full-featured board that delivers unprecedented 3D and 2D performance for the creative or engineering professional. The Matrox Millennium G450 offers fast acceleration for 2D and entry-level 3D users, a 32MB DDR frame buffer memory, and a Dual Head display option.
Single or dual Intel Pentium III processors 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 slots provide 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.
Preinstalled and certified Windows NT® 4.0 and Windows® 2000 Professional	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 Visual Workstation
Technical Specifications

Operating System
- Windows 2000 Professional or Windows NT Workstation 4.0

Chassis Style
- Tower ATX form factor

Processor
- Intel Pentium III processor; 1 GHz, 933 MHz, or 866 MHz, single or 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™ 4110 VIO
- High level of real-time on-screen performance; highly tuned 3,200 MFLOPS geometry pipeline; 64MB frame buffer; 64MB 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); 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

VPro VR7
- 64MB unified frame buffer provides ample room for the high-resolution 32 bpp textures favored by professional users even in high-resolution, double-buffered display modes; second-generation transform and lighting engines that set a new standard for geometry processing speed and precision for the most demanding professional applications, including CAD and digital content creation; hardware anti-aliased line engine boosts the speed and quality of anti-aliased lines, so that mechanical designers and other CAD users can work in wireframe mode without suffering the effects of aliasing; 32-bit Z stencil buffer delivers the high precision demanded by professional users for rendering complex objects and highly detailed 3D environments without Z-precision artifacts; Microsoft® DirectX and OpenGL optimizations and support assure the best performance and guarantee compatibility with the broadest possible range of applications from high-end professional applications to consumer applications and games; robust and full-featured board that delivers unprecedented 3D and 2D performance for the engineering professional

Matrox Millennium G450
- Matrox Millenium 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
- 1600SW flat panel display with Silicon Graphics MultiLink™ adapter

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
- 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 data-storage devices; one external bay for floppy drive; one bay for CD-ROM

Maximum Internal Storage Capacity
- 219GB; supports three 1"-high or two 1.6"-high drives

Card Expansion Slots
- Seven full-length slots: one AGP Pro 50, 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
- 300 W; provides +3.3 VDC, +5 VDC, +12 VDC, and -12 VDC to system components; accepts 90–135 VAC or 180–264 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 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

Power Consumption (Based on 120 VAC, 60 Hz)
- 324 W; 2.7 A at 120 VAC maximum configuration

Physical Specifications
Tower
- Dimensions (HxWxD): 53.3 x 19.3 x 52.1 cm (21 x 7.6 x 20.5")
- Weight: 24.95 kg (55 lb) maximum 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

Sound Mode	Pressure	Power
Idle	~37 dBA	4.8 Bels
Operating	~44.6 dBA	5.4 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.

Corporate Office
1600 Amphitheatre Pkwy.
Mountain View, CA 94043
(650) 960-1980
www.sgi.com

North America 1(800) 800-7441
Latin America (52) 5267-1387
Europe (44) 118.925.75.00
Japan (81) 3.5488.1811
Asia Pacific (65) 771.0290

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