OXYGEN® VX1-1600SW

32MB Professional Graphics for the Silicon Graphics 1600SW Flat Panel Monitor

The Oxygen® VX1-1600SW is a new variant of the award-winning Oxygen VX1 professional graphics accelerator that has been engineered to directly drive the acclaimed Silicon Graphics® 1600SW flat panel at a stunning, all-digital, 1600x1024 wide-format resolution. The Oxygen VX1-1600SW combines 3Dlabs' outstanding 2D and PowerThreads™ OpenGL® 3D performance with a dedicated LVDS output connector for driving the 1600SW without the need for an external adaptor - creating an ideal display solution for discerning business, technical, and creative professionals. Unlike graphics cards based on gaming technology, the Oxygen VX1-1600SW is a true professional graphics solution with 3Dlabs' renowned OpenGL quality and extensive application certifications for trouble-free performance.

- **Standard VGA and LVDS Display Connectors**
  Auto sensing display connectors for straightforward direct connection to a standard analog display or the Silicon Graphics 1600SW flat panel monitor.

- **Outstanding Display Quality**
  Only the Silicon Graphics 1600SW display packs all-digital fast pixel response for flawless real-time interactivity, a wide-format aspect ratio for displaying two side-by-side pages, 110 dpi dot pitch, 3X the brightness and 5X the contrast of CRTs in a stylish, award-winning space-saving design.

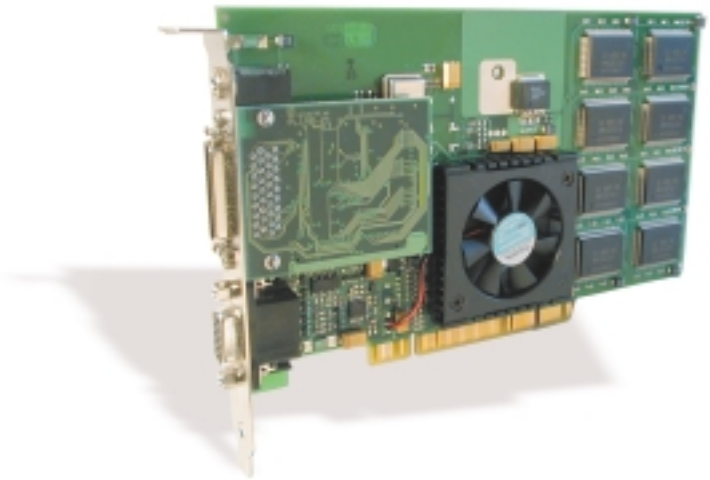
- **Professional GLINT R3 Processor**
  Professional quality, unified 2D, 3D and video processing and hardware accelerated volumetric rendering.

- **32MB of On-Board SGRAM Memory with Virtual Texturing**
  Oxygen VX1-1600SW acts as a full 256MB graphics card while caching textures in the on-board high-speed SGRAM memory for smooth graphics interaction on the high-resolution 1600SW screen.

- **Multi-Threaded PowerThreads OpenGL Drivers**
  3Dlabs' PowerThreads OpenGL drivers are fully optimized for Intel Pentium and AMD Athlon processors to maximize geometry throughput. The multi-threaded architecture of PowerThreads unleashes the power of single or multiple CPU systems.

- **Over 50 Application Certifications**
  Oxygen boards are certified with all key professional CAD and DCC applications, ensuring optimal and trouble free acceleration.

- **Control Panel Application Configuration**
  3Dlabs' advanced control panel and task-bar applet enables point-and-click optimization of system configuration for key professional applications.



PRAISE FOR OXYGEN VX1-1600SW

"The quality and stability of the Oxygen VX1-1600SW is phenomenal and we are thrilled to be able to offer existing and new users of the 1600SW a cost-effective, direct-drive board with true professional-grade 2D and OpenGL performance."

Joel Ingulsrud
Product Manager, Flat Panel Displays, SGI

3Dlabs®

OXYGEN® VX1-1600SW

32MB Professional Graphics for the Silicon Graphics 1600SW Flat Panel Monitor

Technical Specifications

Silicon Graphics 1600SW Display Specifications
- 17" diagonal (19" CRT equivalent)
- 1600x1024, 16:10 wide format display
- Proprietary LVDS digital interface
- 110 dpi dot pitch
- LCD backlight color temperature control for enhanced color matching and dynamic range

GLINT R3 Rasterization Processor
- Unified 2D, 3D and video processing
- 128-bit memory bus architecture
- Integrated 300MHz RAMDACs
- 7 independent DMA engines provide low CPU utilization
- Integrated SVGA Controller

PowerThreads OpenGL Drivers
- PowerThreads OpenGL ICD with full Intel SSE and AMD 3DNow! optimizations
- OpenGL 1.1 ICD (1.2 ready)
- Multi-threaded, multiprocessor system optimized

Professional 3D Rendering
- Complete OpenGL 1.2 functionality in silicon
- Full OpenGL overlays
- Single pass bump-mapping, per-pixel lighting
- High-quality Gouraud shading
- Perspectively correct bilinear and trilinear filtering with per-pixel mip-mapping
- Dual bilinear mip-mapped textures in a single pass
- 2048x2048x32 maximum individual texture size
- OpenGL 1.2 volumetric rendering with up to 8-way filtering
- Source and destination alpha blending
- Fogging and Depth Cueing
- Anti-aliased lines and polygons
- Full-scene anti-aliasing
- Hardware scissoring, stippling and stencil buffers
- GID clipping for efficient window management
- 32 bit Z-buffering

Integrated Video Processing
- Bilinear filtered playback re-scaling
- Hardware YUV-RGB conversion
- Hardware MPEG-2 Motion Compensation

Virtual Texturing Memory Management
- Full virtual memory management unit in GLINT R3 silicon
- Enables the board to act as a full 256MB graphics card

Memory
- 32MB of unified high-speed SGRAM for framebuffer, Z-buffer and texture memory

Board Physical
- Short-card ATX form-factor
- PCI 32-bit 33/66MHz Version 2.1

Connectors
- DB-15 analog display connector
- LVDS 1600SW panel connector
- 1/4" jack stereo connector
- Autoselect between analog and digital connectors under Windows NT and Windows 2000

Stereo Support
- True Quad-buffered Stereo support on CRT displays up to 1280x1024 true-color, 160Hz refresh rate
- Independent Z buffer for left and right eye

Drivers
- Windows NT 4.0 with PowerThreads OpenGL ICD
- Windows 2000 with PowerThreads OpenGL ICD and DirectX 7.0
- Windows 98 with PowerThreads OpenGL ICD and DirectX 7.0
- DDC2B support on all operating systems

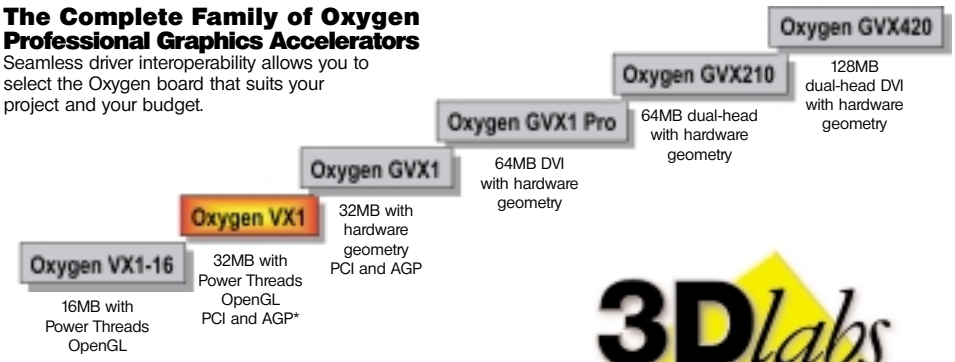
Advanced Control Panel
- Point-and-click optimization of system configuration for key professional applications

System Requirements
- 100% IBM-compatible PC
- Intel Pentium or AMD Athlon processor or compatible
- IBM compatible motherboard with PCI slot
- Microsoft Windows 2000 or NT 4.0 with Service Pack 5 or higher
- 64MB System memory
- 16MB free disk space

Warranty
- Three (3) years parts and labor limited warranty

The Complete Family of Oxygen Professional Graphics Accelerators

Seamless driver interoperability allows you to select the Oxygen board that suits your project and your budget.



* The Oxygen VX1-1600SW is a variant of the award-winning Oxygen VX1 workstation graphics accelerator.

Where To Buy the Silicon Graphics 1600SW Display

The Silicon Graphics 1600SW display is available through SGI resellers and distributors. For more information please refer to www.sgi.com/go/flatpanel.

Supported Screen Resolutions

	8bpp 256 Colors	16bpp 64K Colors	32bpp 16.7M Colors
640x480	220Hz	220Hz	220Hz
800x600	220Hz	220Hz	220Hz
1024x768	220Hz	220Hz	217Hz
1152x864	217Hz	217Hz	176Hz
1280x960	176Hz	176Hz	145Hz
1280x1024	145Hz	145Hz	137Hz
1600x1024	145Hz	60Hz / 145Hz	60Hz / 145Hz
1600x1200	75Hz	75Hz	75Hz
1920x1080	100Hz	100Hz	100Hz
1920x1200	85Hz	85Hz	85Hz
2048x1536	60Hz	60Hz	60Hz

Maximum refresh rates. Actual rates are dependent on your monitor and operating system.

1600SW / CRT

Fully Tested and Optimized On All Leading Professional Applications

DCC applications, including:

3D Studio Max	Houdini	Maya
3D Studio Viz	Lightscape	Softimage XSI
Animation Master	LightWave 3D	TrueSpace

CAD applications, including:

ArchiCAD	Co-Create	Pro/ENGINEER
AutoCAD	I-DEAS	SolidWorks
CATIA	MicroStation J	Unigraphics

Contacts, Service and Support

For more information and online technical support, visit us at www.3dlabs.com. Buy online at www.3dlabs.com/store.

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