

### MODELS

**3Dlabs Oxygen GVX1 (AGP)  
Graphics Controller**  
136398-B21

**3Dlabs Oxygen GVX1 (PCI)  
Graphics Controller**  
136397-B21

The 3Dlabs Oxygen GVX1 Graphics Controller is a high performance 3D graphics solution for users who require Professional 3D graphics features and the best balance of price and performance.

### Overview

The 3Dlabs Oxygen™ GVX1 Graphics Controller is a high performance 3D graphics solution for users who require Professional 3D graphics features and the best balance of price and performance. The 3Dlabs Oxygen GVX1 is based on the 3Dlabs GLINT R3 graphic rendering controller and GLINT Gamma geometry processor. The GLINT R3 implements a complete Professional 3D quality graphics pipeline and display management sub-system on a single device, enabling the Oxygen GVX1 to provide performance and functionality that will surpass most of today's highest performance adapters at a much lower cost. GLINT Gamma is the industry's first single chip designed to break the 3D lighting and geometry bottleneck on Intel based workstations. GLINT Gamma implements the complete OpenGL 3D lighting and geometry pipeline. The combination of the GLINT R3 and GLINT Gamma on the Oxygen GVX1 makes this graphics controller an ideal choice for 3D-application performance for CAD, CAM, DCC, GIS, solids modeling and visual data analysis applications. The 3Dlabs Oxygen GVX1 includes 3Dlabs' new-generation PowerThreads SSE OpenGL drivers. The PowerThreads SSE drivers with Dynamic Load Balancing provide optimized support for OpenGL 1.1, SIMD extensions and are optimized for multiprocessor systems under Windows NT 4.0.

The 3Dlabs Oxygen GVX1 Graphics Controller is available in an AGP ATX form factor and PCI form factor, which can be combined with the AGP version for dual-display support. Both a VGA connector and digital flat panel (Panel Link) connector are standard on the Oxygen GVX1. The AGP-based Oxygen GVX1 is supported as the primary graphics device on selected Compaq Professional Workstations running Windows NT 4.0.

### Performance

The 3Dlabs Oxygen GVX1 Graphics Controller includes 32 MB of memory. It features a unified memory architecture that allows optimum use of local memory for the frame buffer and texture memory. In addition to the local memory capacity of 32 MB, the Oxygen GVX1 product supports a unique 3Dlabs technology known as Virtual Texture Mapping. This technology features on-demand loading of textures into local memory on a page-by-page basis, with a 4-KB page granularity. The loading of new texture pages are handled by the GLINT R3, with no memory management support required of the software drivers.

The bilinear fill rate of 230M texels/second and trilinear fill rate of 115M texels/second and the ability to display 4.75 million fully transformed and lit polygons per second are key performance features of this Professional 3D graphics solution.

### Functionality and Uses

The 3Dlabs Oxygen GVX1 is a high-quality graphics controller for professionals requiring solid 2D and 3D features, best balance of price and performance along with full OpenGL 1.1 support.

Users of Professional 3D graphics applications, such as Discreet MAX, Lightwave and Softimage as well as CAD and CAE applications like PRO/E, UG, Solidworks, and AutoCAD benefit from the capabilities of this graphics controller. The Oxygen GVX1 is bundled with Soft Engine 4 AutoCAD display list drivers from Vibrant Graphics, Inc.

The Oxygen GVX1 has excellent Gamma correction support via Sonnetech, Ltd.'s "Colorific" technology. Utilizing this process allows the user to have their display color corrected to accurately reflect their output medium, whether it is print or film.

The 3Dlabs Oxygen GVX1 runs applications in 16.7 million photo-realistic colors. It also supports true 24-bit color at resolutions up to 1920 x 1200 at 76 Hz refresh rate.

In addition, 3D dual-display support is available by combining an AGP-based Oxygen GVX1 with a PCI-based Oxygen GVX1. This dual-display functionality provides a larger viewing area on the desktop allowing the user to work more efficiently and be more productive while minimizing cost and system maintenance.

### Quality and Compatibility

Compaq has a solid reputation for delivering high-quality, reliable enhancement products.

Compaq enhancement products are designed and tested to rigorous specifications, including tough qualification requirements for suppliers, stringent performance specifications, and a thorough testing process to ensure consistent quality from prototype to production.

### Service and Support

The Oxygen GVX1 Graphics Controller carries either a one-year warranty or the remainder of the warranty period for the Compaq unit in which it is installed, whichever is longer.

Round-the-clock support is offered by Compaq's 24x7 technical support hotline, and on-line support forums are available on the Internet.

# QUICKSPECS

3Dlabs Oxygen GVX1  
Graphics Controller

## Technical Specifications

3Dlabs Oxygen GVX1

<b>Dimensions (H x W)</b>	4.25 x 9.283 in/10.8 x 23.6 cm	
<b>Resolution</b>	<b>Maximum Colors Supported</b>	<b>Maximum Refresh Rate</b>
640 x 480	16.7M	100 Hz
1024 x 768	16.7M	100 Hz
1152 x 864	16.7M	100 Hz
1280 x 1024	16.7M	100 Hz
1600 x 1200	16.7M	85 Hz
1920 x 1080	16.7M	85 Hz
1920 x 1200	16.7M	76 Hz
<b>3D Controller</b>	GLINT R3	
<b>Geometry</b>	GLINT Gamma G1	
<b>Bus Type</b>	AGP/PCI for dual-display support	
<b>RAMDAC</b>	Integrated	
<b>Memory Type</b>	SGRAM	
<b>Memory Amount</b>	32 MB (maximum)	
<b>Memory Speed</b>	125 MHz	
<b>Controller Clock Speed</b>	125 MHz	
<b>Color Planes</b>	24 bit double buffered	
<b>Overlay Planes</b>	8 bit shared with alpha	
<b>Stencil Planes</b>	8 bit with 24-bit Z-buffer	
<b>Alpha Planes</b>	8 bit shared with overlay	
<b>Z-buffer</b>	24 bit (32 bit with no stencil)	
<b>Total bits/pixel</b>	96	
<b>Maximum Vertical Refresh Rate</b>	120 Hz	
<b>Maximum Pixel Clock</b>	300 MHz	
<b>Operating Systems</b>	Windows NT 4.0	
<b>Dual-display Support<sup>2</sup></b>	Yes (combining one Oxygen GVX1 AGP card with one Oxygen GVX1 PCI card)	
<b>Products Supported</b>	Compaq Professional Workstation AP200 (Pentium III processor), AP500 (Pentium III processor), AP550, SP700, SP750, Compaq Deskpro Workstation AP250	
<b>Stereographics Support</b>	Yes	
<b>Resolution/Refresh Rates Supported for Stereographics Functionality:</b>		
<b>Resolution</b>	<b>Maximum Colors Supported</b>	<b>Maximum Refresh Rate</b>
1152 x 864	16.7M	132 Hz
1280 x 800	16.7M	118 Hz
1280 x 960	16.7M	118 Hz
1280 x 1024	16.7M	118 Hz

<sup>1</sup>. Not all settings are available on all monitors.

<sup>2</sup>. PCI version of the Oxygen GVX1 card is not supported by Compaq as a primary graphics device as in single-display mode.

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