

MODELS

**Compaq PowerStorm 600
Graphics Controller for the
Compaq Professional
Workstation AP500, AP550,
SP700, and SP750**

The Compaq PowerStorm 600 Graphics Controller delivers superior OpenGL 3D graphics performance for the most demanding professional applications.

Overview

The Compaq PowerStorm 600 graphics controller delivers superior OpenGL 3D graphics performance for the most demanding professional applications. The Compaq PowerStorm 600 is based on the Wildcat™ 4000 graphics controller from Intense3D. It provides best-in-class graphics features and performance for CAD, CAM, CAE, DCC, GIS and visual data analysis applications. The Compaq PowerStorm 600 provides optimized support for OpenGL 1.1 under Windows NT 4.0.

The Compaq PowerStorm 600 graphics controller is available on select Compaq Professional Workstation SP700 models. Specific power, thermal and mechanical features are required for this powerful graphics controller.

Performance

The Compaq PowerStorm 600 graphics solution incorporates 16 MB of frame buffer memory and 64 MB of texture memory. Key performance features of this best-in-class solution include the ability to render up to 3.4M, Z-buffered, 25 pixel, Gouraud Shaded, triangles/second and a tri-linear fill rate of 68M pixels/second for real-time rendering of complex-shaded and textured models. The Compaq PowerStorm 600 delivers visuals of the highest quality and maximum realism in real-time.

The Compaq PowerStorm 600 includes dedicated, highly tuned geometry processing for hardware acceleration of the following features:

- Model View matrix transformation of vertex and normal coordinates
- Texture matrix transformation of texture coordinates
- Full lighting calculations with up to eight light sources
- Up to six user clip planes
- Perspective transformation
- Viewport transformation
- View volume clipping
- Local Display List storage and processing

Functionality and Uses

The Compaq PowerStorm 600 graphics controller is a high-quality graphics solution for professionals requiring solid 2D and 3D features and superior performance. Full OpenGL functionality is supported.

The 16-MB frame buffer memory supports true 24-bit color at resolutions of up to 1280 x 1024 at an 85 Hz refresh rate.

The 64 MB of texture memory that is standard on the Compaq PowerStorm 600 graphics controller provides abundant memory for complex true-color textures and enables users to apply numerous extremely detailed texture maps without compromising performance.

Full OpenGL quad buffered stereo is supported for the highest 3D visual quality when using head mounted displays and shutter glasses. Compaq conducts engineering verification of stereographics capabilities using CrystalEyes products from StereoGraphics Corporation.

The Compaq PowerStorm 600 is the solution for all technical and creative professionals who require the best-in-class features and performance of a geometry accelerated graphics controller. This includes CAD/CAM/CAE: Pro/E, EDS Unigraphics, SDRC Ideas, Dassault Catia (Cnext), Solidworks: DCC: Kinetix 3D StudioMAX, Alias/Wavefront (Maya), Softimage, Newtek Lightwave; Visualization: AVS, Fluent, Paradigm; and GIS: ESRI, ERDAS, Autometric.

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 Compaq PowerStorm 600 Graphics Controller carries the longer of either a one-year warranty¹ or the remainder of the warranty period for the Compaq unit in which it is installed.

Around-the-clock support is offered by Compaq's 7 x 24 technical support hotline, and on-line support forums are available on the Internet.

SPECIFICATIONS

Compaq Products Supported	SP700 models with 500-MHz or 550-MHz processors
Vertical Frequency	60-85 Hz
Graphics Controller	Intense3D Pro 3600
Geometry Accelerator	Lynx V
Bus Type	PCI & AGP
RAMDAC	IBM RGB640
Memory Type	SDRAM
Memory Amount	16 MB Frame Buffer and 64 MB Texture Memory
Maximum Memory	16 MB Frame Buffer and 64 MB Texture Memory
Memory Speed	143 MHz and 147 MHz
Data Path	112 bit
Controller Clock Speed	170 MHz
Maximum Vertical Refresh Rate	85 Hz
Maximum Pixel Clock	157 MHz
Stereographic support	Yes
Operating System Support	Windows NT 4.0

TOTAL BITS/PIXEL

Total Bits/Pixel	100 bits @1280 x 1024	128 bits @ 1152 x 864
Image Planes	24 bit double buffered	24 bit double buffered
Z-Buffer	24 bit	32 bit
Overlay	4 bit (max), double buffered	8 bit (max), double buffered
Stencil Planes	6 bit (max)	8 bit (max)
Alpha Planes	0 bit	8 bit
	Yes – Source Alpha	Yes – Source Alpha
	Yes – Alpha Blending	Yes – Alpha Blending
	No – Destination Alpha	Yes – Destination Alpha
Mask	2 bit	4 bit
Window ID	None	None
Image DB control	1 bit	1 bit
Overlay DB control	1 bit	1 bit
Fast clear Buffer	1 bit double buffered	1 bit double buffered
Image VLT selection	4 bit	4 bit

RESOLUTIONS SUPPORTED²

		Bits per Pixel	Aspect Ratio
1440 x 900			
Maximum Colors	16.7M	100	16 x 10
Maximum Refresh Rate Supported by Driver	85 Hz		
1280 x 1024			
Maximum Colors	16.7M	100	5 x 4
Maximum Refresh Rate Supported by Driver	85 Hz		
1280 x 960			
Maximum Colors	16.7M	100	4 x 3
Maximum Refresh Rate Supported by Driver	85 Hz		
1152 x 864			
Maximum Colors	16.7M	128	4 x 3
Maximum Refresh Rate Supported by Driver	85 Hz		
1024 x 768			
Maximum Colors	16.7M	128	4 x 3
Maximum Refresh Rate Supported by Driver	85 Hz		
800 x 600			
Maximum Colors	16.7M	128	4 x 3
Maximum Refresh Rate Supported by Driver	72 Hz		
640 x 480			
Maximum Colors	16.7M	128	4 x 3
Maximum Refresh Rate Supported by Driver	85 Hz		

STEREO RESOLUTIONS SUPPORTED

		Bits per Pixel	Aspect Ratio
800 x 600			
Maximum Colors	16.7M	128	4 x 3
Maximum Refresh Rate Supported by Driver	120 Hz		
640 x 480			
Maximum Colors	16.7M	128	4 x 3
Maximum Refresh Rate Supported by Driver	120 Hz		

¹ Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center for details.

² Not all monitor settings are available on all monitors.

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