

QUICKSPECS

Intense3D Wildcat 4110 PRO Graphics Controller

MODELS

Intense3D Wildcat 4110 PRO Graphics Controller 136418-B21

The Intense3D Wildcat 4110 PRO Graphics Controller delivers leadership OpenGL 3D graphics performance for the most demanding professional 3D graphics applications.

Overview

The Intense3D Wildcat 4110 PRO graphics controller delivers up to twice the performance of the previous Wildcat 4000 accelerators (Compaq Powerstorm 600) and is the OpenGL 3D graphics performance leader for demanding design, engineering, and DCC professionals who are working with large data models in real-time. The Intense3D Wildcat 4110 PRO is an AGP-Pro50 version of the Wildcat 4110 and can only be installed in systems that have an AGP-Pro slot. The Wildcat 4110 PRO is the "single pipeline" version of the Wildcat Parascale™ architecture and includes a single geometry accelerator and single render engine.

The Intense3D Wildcat 4110 PRO provides optimized support for OpenGL 1.2 under Windows NT 4.0 and incorporates support for both analog monitors and digital DVI-I flat panel displays.

The Intense3D Wildcat 4110 PRO graphics controller is available as an option for installation on the Compaq Professional Workstation AP550 and SP750 models. These new models along with Intel Pentium III and Pentium III Xeon 733 MHz processors, 840 core logic chipset, and the Wildcat 4110 PRO are now the industry's leading graphics Windows NT workstation solution based on the SPEC Viewperf benchmark suite, outperforming all comparably configured Windows NT/Intel and UNIX/RISC workstations on the market today.

Performance

The Intense3D Wildcat 4110 PRO graphics solution incorporates 8 MB of Direct Burst memory, 64 MB of frame buffer memory supporting Intense3D's SuperScene™ full scene, multisampled antialiasing, and 64 MB of texture memory. Key performance features of this best-in-class solution include the ability to render up to 6M, Z-buffered, Gouraud Shaded, triangles/second, and a peak, tri-linear fill rate of 143M pixels/second for real-time rendering of complex -shaded and textured models. The Intense3D Wildcat 4110 PRO delivers images of the highest quality and maximum realism in real-time and has the industry leading, measured SPECViewperf ProCDRS-02 of 37 fps.

The Intense3D Wildcat 4110 PRO 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 twenty-four light sources
- Up to six user clip planes
- Perspective transformation
- Viewport transformation
- View volume clipping
- Local Display List storage and processing
- Image processing

Functionality and Uses

The Intense3D Wildcat 4110 PRO graphics controller is designed for many distinct user groups:

- Designers and engineers in the aeronautical, automotive and heavy goods industries working with mid to large assemblies or complex models, needing the fastest application response times
- Animators, compositors, industrial designers and artists in the digital content creation and animation industries working with detailed visual effects, animation and 3D-modelling needing the largest texture memory and fastest application performance available
- Cartographers, geologists, military personnel, cellular network planners, and transportation officials in the defense, local government, electric and gas utilities, and telecommunications industries working with aerial photography and satellite imagery to create advanced 3D models for research, environmental assessment and mission planning requiring high resolution display, stereo support, and fastest system response available

The Intense3D Wildcat 4110 PRO's Parascale™ architecture combines tuned, OpenGL 1.2 driver software with large texture memory, advanced geometry acceleration and rendering engines to provide the world's fastest functionality in areas of shaded rotations, transparency and texture mapping making it the only solution for applications users seeking ultimate time-to-completion.

The optional Intense3D Wildcat 4110 PRO is offered by Compaq for all technical and creative professionals creating, manipulating, and analyzing the largest and most complex models in 3D.

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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 Intense3D Wildcat 4110 PRO Graphics Controller carries the longer of either a one-year warranty 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.

Technical Specifications

Vertical Frequency	60-85 Hz
Graphics Controller/Geometry Accelerator	Intense3D Parascale™ architecture with single geometry accelerator and rendering engines.
Bus Type	AGP- Pro50
RAMDAC	220 MHz
Memory Type	SDRAM
Memory Amount (maximum)	64 MB frame buffer, 64 MB texture memory, and 8 MB direct burst memory
Memory Speed	143 MHz frame buffer and texture buffer , 133 MHz direct burst memory
Data Path	128-bit frame, 64-bit texture, 133-bit direct burst
Controller Clock Speed	147 MHz geometry, 146 MHz rendering
Maximum Vertical Refresh Rate	85 Hz
Maximum Pixel Clock	220 MHz
Stereographic Support	Yes
Operating System Support	Windows NT 4.0
Products Supported	Compaq Professional Workstation AP550 or SP750

Supported Plane Sets

Buffer	96 bits per pixel mode	128 bits per pixel mode	160 bits per pixel mode	196 bits per pixel mode
Image Planes	24 bit double buffered	24 bit double buffered	24 bit double buffered	24 bit double buffered
Z-Buffer	24 bit	32 bit	24 bit	32 bit
Overlay	4 bit (max), double buffered	8 bit (max), double buffered	4 bit (max), double buffered	8 bit (max), double buffered
Stencil Planes	8 bit (max)	8 bit (max)	8 bit (max)	8 bit (max)
Alpha Planes	0	8 bit double buffered	0	8 bit double buffered
Mask	2 bit	2 bit	2 bit	4 bit
Image DB Control	1 bit	1 bit	1 bit	1 bit
Overlay DB Control	1 bit	1 bit	1 bit	1 bit
Fast clear Buffer	1 bit double buffered	1 bit double buffered	1 bit double buffered	1 bit double buffered

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Resolutions Supported

The following tables show the highest resolutions and corresponding highest refresh rates supported for the 4110 (64 MB frame buffer) with multisampling. Resolutions higher than 1280x1024 are supported only for analog CRT monitors. digital flat panel monitor support is limited to 112 Mpix/sec, equating to a maximum digital flat panel resolution of 1280x1024 at 60Hz.

Aspect Ratio	96 bits per pixel	128 bits per pixel	160 bits per pixel	192 bits per pixel
4 x 3	1824 x 1368 (65 Hz)	1600 x 1200 (75 Hz)	1824 x 1368 (65 Hz)	1600 x 1200 (75 Hz)
5 x 4	1280 x 1024 (85 Hz)	1280 x 1024 (85 Hz)	1280 x 1024 (85 Hz)	1280 x 1024 (85 Hz)
16 x 9	2048 x 1152 (70 Hz)	1920 x 1080 (75 Hz)	2048 x 1152 (70 Hz)	1920 x 1080 (75 Hz)
16 x 10	1920 x 1200 (70 Hz)	1824 x 1128 (75 Hz)	1920 x 1200 (70 Hz)	1824 x 1128 (75 Hz)
5 x 4 Frame Sequential Stereo	1280 x 1024 (52 Hz)	Not applicable	1280 x 1024 (52 Hz)	Not applicable
4 x 3 Frame Sequential Stereo	1280 x 960 (60 Hz)	1152 x 864 (60 Hz)	1280 x 960 (60 Hz)	1152 x 864 (60 Hz)

External Interfaces

The Wildcat 4110 product supports 3 external interfaces:

- Analog Video Output Port - The video port (female, 15-pin, D-SUB connector) provides connection to an analog CRT display.
- Stereo Port - The stereo port (female, 3-pin, mini-DIN connector) provides connection to a LCD shutter glasses emitter module or to other stereo shutter devices. This connector conforms to the VESA Stereo Port specification, and is different than the stereo port that has been in use for some time on Intergraph realIZm, Intense3D Pro, and Wildcat 4000 (Compaq PowerStorm 600) graphics boards. The stereo port provided on these earlier products is a 5-pin mini-DIN connector. Equipment designed for the 5-pin connector will not plug into the 3-pin connector and vice-versa. In addition, the new 3-pin port provides 5V instead of the 12V that the 5-pin port provides.
- Digital Video Output Port (DVI-I) - The Digital Video Output Port uses a DVI-I receptacle with 29 signal contacts as specified by the Digital Visual Interface Revision 1.0 specification

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